



**NEBRASKA**  
DEPARTMENT OF EDUCATION

**Nebraska Student Centered Assessment System  
Alternate Assessment of Mathematics  
Grades 3–8 and 11**

2018  
Final Standard Setting Technical Report

Prepared for the  
Nebraska Department of Education

Data Recognition Corporation  
Maple Grove, MN 55311



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# A

## Standard Setting Methodology and Recommendations

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## Standard Setting Methodology

### Summary

On June 4–7, 2018, staff members from Data Recognition Corporation (DRC) partnered with the Nebraska Department of Education (NDE) to conduct a standard setting for the Nebraska Student-Centered Assessment System—Alternate Assessment of Mathematics (NSCAS-AAM) tests in grades 3–8 and 11.

A committee of 22 Nebraska educators engaged in the Angoff Yes/No procedure (Impara & Plake, 1997) to make their cut score recommendations. Participating educators examined achievement level descriptors (ALDs) and test items, and they made content-based judgments about the test items that students in each achievement level would be expected to answer correctly.

Participants recommended cut scores that defined three achievement levels: *Developing*, *On Track*, and *CCR Benchmark*. These achievement level names were not finalized at the time of the standard setting, so participants referred to them simply as *Level 3*, *Level 2*, and *Level 1*, where *Level 1* represents the highest level of knowledge, skills, and abilities.

Participants took part in several rounds of discussions and judgments for each grade in the NSCAS-AAM program. After the standard setting, NDE presented participants' recommendations to the Nebraska State Board of Education for approval. The Board approved the cut scores on August 3, 2018. After this approval, DRC used linear interpolation to express the approved cut score on the final reporting scales, such that the *On Track* cut score in each grade is equal to 200.

Table 1 shows the approved cut scores, on both raw-score and scale-score (final reporting scale) metrics, and the associated impact data from the workshop. Impact data are the percentages of students who would be classified in each achievement level on the spring 2018 administration of the NSCAS-AAM if the cut scores were implemented, using the data available at the time of the standard setting. A description of the standard setting process follows Table 1.

**Table 1. Approved Cut Scores and Associated Impact Data for Grades 3–8 & 11 NSCAS-AAM**

Grade	Approved Cut Scores (Raw Scores)		Approved Cut Scores (Scale Scores)		Impact Data from Spring 2018			
	<i>On Track</i>	<i>CCR Benchmark</i>	<i>On Track</i>	<i>CCR Benchmark</i>	<i>Developing</i>	<i>On Track</i>	<i>CCR Benchmark</i>	<i>On Track or Above</i>
<b>3</b>	13	22	200	252	42.3%	39.4%	18.4%	57.8%
<b>4</b>	15	25	200	250	41.9%	42.9%	15.1%	58.0%
<b>5</b>	15	25	200	252	40.3%	49.7%	10.3%	60.0%
<b>6</b>	15	27	200	267	38.5%	52.7%	8.8%	61.5%
<b>7</b>	15	27	200	283	42.0%	53.2%	4.4%	57.6%
<b>8</b>	16	27	200	270	43.5%	49.5%	7.1%	56.6%
<b>11</b>	18	27	200	256	50.2%	42.7%	6.9%	49.6%

## Background

The NSCAS-AA tests are designed to measure the content knowledge, skills, and understandings of students with significant cognitive disabilities. These alternate assessments, administered in grades 3–8 and 11, focus on English language arts (NSCAS-AAELA) and mathematics (NSCAS-AAM). The NSCAS-AAS tests focus on science in grades 5, 8, and 11.

New Extended Indicators for ELA were approved in school year 2015–16. These Extended Indicators, designed for students with the most significant cognitive disabilities who take the NSCAS-AAELA, align with the statewide College and Career Ready ELA Standards. The NSCAS-AAELA tests administered in spring 2017 were the first to align to these new Extended Indicators for ELA (Data Recognition Corporation, 2017).

In school year 2016–17, the Extended Indicators for mathematics (Nebraska Department of Education, 2018) were approved. As with the Extended Indicators for ELA, the Extended Indicators for Math are designed for students with the most significant cognitive disabilities who take the NSCAS-AAM, and they align with the statewide College and Career Ready Math Standards.

The NSCAS-AAM administered in spring 2018 was the first to measure the knowledge and skills specified in the Extended Indicators for mathematics. Accordingly, a new standard setting was needed to establish *cut scores* for the NSCAS-AAM. These cut scores reference the levels of mastery that students need to demonstrate on the Extended Indicators for mathematics in order to be classified in any of the three achievement levels.

To promote consistency across content areas, the same standard setting methodology was used for the NSCAS-AAM 2018 as was used in 2017 for the NSCAS-AAELA. This document describes the standard setting process for the NSCAS-AAM tests.

## Choosing a Standard Setting Method

Each of the NSCAS-AAM tests comprises a set of 25–30 selected-response items. These items are presented to the student as part of a one-on-one test administration, and teachers record students' responses electronically. To set performance standards on this assessment, NDE chose the Angoff Yes/No procedure (Impara & Plake, 1997), a frequently used modification of the Angoff (1971) standard setting process. This method was selected because (a) it was used on the NSCAS-AAELA assessments in summer 2017; (b) it allows teachers to study the test items and make content-based judgments about the expectations for students; and (c) it does not require long test forms or larger item pools, like some item-mapping methods (e.g., Bookmark).

The standard setting was conducted in Lincoln, Nebraska, on June 4–7, 2018. The agenda for the workshop is presented in Section B of this report.

## Promoting Well-Articulated Achievement Standards

The achievement standards for the NSCAS-AAM were designed to mirror the progression found in the content standards and Extended Indicators: they were designed to be *well-articulated* from grade 3 through high school. To accomplish this, articulation was considered in two ways:

- The achievement level descriptors (ALDs) were designed to mirror the content-based progression in the content standards. Accordingly, the content-based expectations for students in *On Track (Level 2)* forms a progression across grades, as do the expectations for students in *CCR Benchmark (Level 1)*.
- The *impact data*, or the proportions of students classified in each achievement level, were expected to form a reasonable, explainable pattern across grades.

To promote well-articulated standards, the participating educators worked together on the first two days of the standard setting to recommend cut scores for grade 6. The educators then split into two groups to make cut score recommendations for the remaining grades.

During the standard setting, participants actively considered the impact data across grades, making sure the proportions of students classified in each achievement level was (a) commensurate with the content-based expectations found in the ALDs and (b) part of a reasonable pattern when viewed across grades.

Across-grade articulation was an essential component of the NSCAS-AAM standard setting, and the steps taken to consider this articulation is described throughout this report.

### Achievement Level Descriptors

Another step used to promote across-grade articulation was through the creation of the achievement level descriptors (ALDs). For each grade, the ALDs summarize the knowledge, skills, and understandings that are expected of students in each achievement level. The ALDs are presented in Section F of this report.

In advance of the standard setting workshop, NDE and DRC worked with groups of Nebraska educators to develop and revise the ALDs. As described later in this section, the ALDs were then used by standard setting participants to cultivate a deep understanding of the content-based expectations for students in each grade. After the workshop, the ALDs may be used by NDE to communicate the intended meaning behind each achievement level to educators in the field, to families, and to the community.

As stated previously, the final names of the achievement levels were not known at the time of the workshop. Accordingly, participants referred to the levels as *Level 3*, *Level 2*, and *Level 1*, where *Level 1* referred to the highest level of knowledge and skills. After the workshop, the Nebraska State Board of Education approved the achievement level names as *Developing*, *On Track*, and *CCR Benchmark*. In this section, both sets of names are used to refer to the achievement levels. In subsequent sections of this report, the *Level 3/2/1* names, as used at the workshop, are preserved.

### Workshop Committee

NDE recruited participants from across the state of Nebraska for the standard setting. A total of 22 educators participated in the standard setting.

Two committees worked independently and in concert to recommend cut scores for the NSCAS-AAM tests. These committees are summarized here:

- 1) *Grades 3–6 committee.* The committee recommended cut scores for grades 3–6. The committee consisted of 10 educators.
- 2) *Grades 6–8 and 11 committee.* The committee recommended cut scores for grades 6–8 and 11. The committee consisted of 12 educators.

The committees began their work together on June 4–5 to recommend cut scores for grade 6. After working together, the two committees split apart to repeat the Angoff Yes/No procedure: one committee focused on grades 3–5 and the other focused on grades 7–8 and 11. On June 7, the committees came together to review cut score recommendations for all grades.

At the standard setting, the 22 participants were seated at tables of 3–4 participants each, as described later in this section. Each table was balanced in terms of gender, profession, and general location in the state.

### Committee Demographics

Section E of this report summarizes the self-reported demographic characteristics of standard setting participants. All 22 of the participants were classroom teachers, and half of the participants reported having more than 10 years of experience in education. The majority of the committee self-identified as Caucasian, which is representative of Nebraska’s teacher population.

### Workshop Staff

The workshop was organized and implemented by the DRC standard setting team within DRC’s Psychometric Services Department. This team also developed this report.

The workshop was co-facilitated by Ricardo Mercado, DRC Research Director, and by Dr. Jessalyn Smith, DRC Research Scientist. Mr. Mercado also provided general training to the workshop participants.

The data analysis for the workshop was led by Sara Kendallen, DRC Sr. Research Analyst, with assistance from Lee McKenna, DRC Research Analyst.

The workshop was organized by John Born, DRC Education Program Management Director. Julie Korts of DRC Psychometric Services did not attend the workshop, but led the creation of the physical materials used at the standard setting.

### Workshop Materials

DRC provided the materials for the standard setting. Participants studied these materials during the standard setting under the direction of workshop staff. These materials included the following:

- **Achievement level descriptors (ALDs).** ALDs summarize the knowledge, skills, and understandings expected of students in each achievement level. The ALDs were developed previously by NDE with assistance from DRC and were provided to participants for their study during the workshop.
- **Test items.** Participants were given copies of the operational tests. All test items were administered operationally in spring 2018.

- **Item map.** Information on each test item was provided on the item map, including the correct answers, and the standard to which each item was aligned.
- **Training materials.** To practice the Angoff Yes/No procedure, participants were given a set of training items. These items were used only for training in the standard setting process. Section C of this report displays the training presentation and materials used at the workshop.
- **Ordered item booklets (OIBs).** The items from each test were presented to standard setting participants in order of difficulty, from easiest to hardest. This ordering was based on actual student performance, as taken from the calibration of the items. (Information about the calibration and test scale can be found in the program technical report.) Participants used the OIBs to gain an understanding of the types of items that were easier and harder for students.

## Standard Setting Procedure

As previously stated, all 22 participants began the workshop in a common training session, and the whole committee worked together to recommend cut scores for grade 6. The workshop began on June 4, 2018, with the opening session.

### *Opening Session and Participant Training*

Jeremy Heneger, NDE Assistant Director of Statewide Assessment, welcomed participants to the standard setting workshop. NDE gave participants the background for the standard setting, including the recent changes to the testing program and why standard setting was needed for the NSCAS-AAM tests. By the end of this session, participants understood the purpose of the standard setting.

DRC then conducted the standard setting training. Mr. Mercado introduced the goals of the standard setting, summarized the roles of standard setting participants, and administered a training exercise using the training items. The training presentation and training materials are presented in Section C of this report.

At the end of the training session, DRC administered a *readiness form* to participants. The readiness form, shown in Figure 1, asked participants if they understood the workshop goals and how to use certain workshop materials, including the OIBs and ALDs. Participants were also asked whether they were ready to proceed with the standard setting process. All 22 participants indicated they understood the workshop goals and materials, and that they were ready to proceed.

### *Angoff Yes/No Procedure for Grade 6*

Working in collaboration with DRC, NDE then seated participants at five tables, checking to make sure the tables were balanced in terms of relevant demographic characteristics. Four to five participants were seated at each table.

Participants worked independently and in concert to recommend cut scores for each grade of mathematics, starting with grade 6. Grade 6 was selected to begin because (a) focusing on a single grade with the entire committee would allow participants to gain a common understanding of what was expected generally of *Level 2* and *Level 1* students, (b) the entire committee could master the Angoff Yes/No Procedure together before repeating it for additional grades, and (c) beginning with the centermost grade in the grades 3–8 and 11 sequence allowed the committee to consider the articulation of the cut scores across grades throughout the workshop.



knowledge and skills associated with a cut score. The group discussed the content-based expectations for each borderline student.

4. Participants examined the test items. To do so, participants examined a version of the teacher test booklet that incorporated the items shown to students and the stimuli read by teachers.
5. Participants then examined the test items in the ordered item booklet (OIB) that presented the items in order of their difficulty. Items were ordered based on actual Nebraska student performance in 2018. More information about the OIB is presented earlier in this section.
6. For each test item, participants considered whether each borderline student would answer the item correctly (e.g., whether a student who was on the borderline between *Developing/Level 3* and *On Track/Level 2* would be expected to answer an item correctly). Participants recorded this determination, *yes* or *no*, on a special form. This process was described as Round 1.
7. At their tables, participants discussed their *yes/no* determinations for each item. Participants were seated at tables of 4–5 participants each. After this table-level discussion, participants individually reconsidered their *yes/no* determinations. This process was described as Round 2.
8. Each participant’s cut score recommendation was taken as the number of items they expected a student just entering a given achievement level to answer correctly (e.g., the number of items the participant determined that the student on the borderline of *Developing/Level 3* and *On Track/Level 2* would answer correctly). Each group’s cut score recommendation was taken as the median of participants’ recommendations for that round.
9. After Round 2, participants examined impact data. Impact data are the percentages of students who would be classified in each achievement level if the cut scores were applied to students’ test scores. Participants were asked to consider how well the impact data matched their expectations based on their study of the Extended Indicators and the test items; and on their knowledge of students in this population.
10. Participants were shown additional information to help build context around the impact data. Specifically, participants were shown the impact data from the 2018 administration of the NSCAS-AAELA (i.e., Nebraska’s alternate ELA assessment), results from Nebraska’s 2017 performance on NAEP for reading and mathematics, and the performance of Nebraska students on the ACT. (Because the Extended Indicators had changed for the NSCAS-AAM, impact data from the 2017 administration of the NSCAS-AAM were not presented to participants.) Although the content area was different, participants were advised that the 2018 impact data from the NSCAS-AAELA may be most helpful to consider when trying to determine whether the recommended cut scores for the NSCAS-AAM were reasonable, as the population of students taking both tests were the same.
11. Participants discussed their *yes/no* determinations across tables as part of a structured discussion facilitated by DRC. Participants then individually reconsidered their *yes/no* determinations. This process was described as Round 3.
12. After Round 3, DRC calculated participants’ recommended cut scores and associated impact data. These values were presented to participants.

### Angoff Yes/No Procedure for Remaining Grades

The committee then subdivided into two groups. The upper-grade group repeated the process for grades 7, 8, and 11. The lower-grade group repeated the process for grades 5, 4, and 3. When repeating the process for subsequent grades, participants were shown presentations of impact data across grades (e.g., for grades 5–7 as participants repeated the process for grades 5 and 7). This way, participants could begin to gauge the *articulation* or consistency of their recommendations across grades.

After the process was completed for all of grades 3–8 and 11, participants were shown their recommended cut scores and associated impact data. These values are shown in Table 2.

**Table 2. Cut scores and associated impact data after Round 3 of the Angoff Yes/No procedure**

Grade	Cut Scores as Number Correct		Cut Scores on the Temporary Test Scale		Developing	Impact Data from Spring 2018		
	On Track	CCR Benchmark	On Track	CCR Benchmark		On Track	CCR Benchmark	On Track or Above
3	13	22	474	605	42.3%	39.4%	18.4%	57.8%
4	14	25	468	590	35.0%	49.8%	15.1%	64.9%
5	15	25	481	618	40.3%	49.7%	10.3%	60.0%
6	15	24	463	581	38.5%	39.8%	21.7%	61.5%
7	15	27	473	692	42.0%	53.2%	4.4%	57.6%
8	18	27	505	679	56.3%	36.7%	7.1%	43.8%
11	17	27	493	650	46.6%	46.3%	6.9%	53.2%

**Temporary Test Scale.** In Table 2, the median cut score recommendations are expressed in two metrics: in terms of raw score and in terms of the *temporary* test scale (i.e., temporary scale score metric). Because the Angoff Yes/No process asked participants to consider the number of items each of the borderline students would be expected to answer correctly, participants spent the vast majority of their time thinking about the cut scores in terms of raw score. However, participants were informed that the cut scores would eventually be expressed on a test scale for each assessment, and that these scale-score cut-scores would be used to compare students’ performance across years.

Before the workshop, NDE decided to continue its tradition of centering its test scales on an important cut score. That is, NDE decided that the test vendor would use linear interpolation to create the final test scales such that the *On Track/Level 2* cut score was equal to 200. Constructed this way, the minimum score needed to be classified as *On Track/Level 2* would be 200, no matter which grade was being considered.

Clearly, the final, approved cut scores were not available before the standard setting, so the final test scales could not be constructed. However, to help participants and staff communicate the cut scores, a *temporary test scale* was constructed for use during the workshop. The cut scores in Table 2 show the Round 3 median cut score recommendations expressed on this test scale.

### Articulation Discussion

After Round 3 of the Yes/No Angoff process was complete for all grades, participants reexamined the cut scores and associated impact data for all the grades in the NSCAS-AAM program. During a facilitated discussion, participants were encouraged to consider the across-grade articulation of their recommendations. Specifically, participants were instructed to examine the impact data across grades

and to consider whether they would recommend any adjustments to their cut score recommendations (taken from Round 3 of the Yes/No Angoff procedure). For example, adjustments might be made because participants' conceptualizations of students on the borderline between achievement levels had changed (e.g., the content-based expectations for students on the borderline between *Level 2* and *Level 1*); or because the committee believed adjustments would improve the across-grade consistency in the overall system of achievement standards.

Working in concert, the committee recommended that several adjustments be made to their cut score recommendations. These recommended adjustments are detailed here.

***On Track/Level 2 in grades 8 and 11.*** Participants noted that the percent of students classified as *On Track/Level 2* and above in grade 8 was lower in grade 8 (44%) than in grade 11 (53%), as based on Round 3 of the Yes/No Angoff procedure. Participants noted that this was surprising: the Extended Indicators (and underlying content standards) were more challenging and more abstract in high school, and they would expect students to perform better on the grade 8 test than on the grade 11 test. At the same time, participants noted that the grade 7 test was markedly more challenging than the grade 6 test (as the grade 7 Extended Indicators presented a marked rise in expectations when compared with the grade 6 Extended Indicators), and the committee was satisfied that the percent of students classified as *On Track/Level 2* and above was an accurate reflection of students' mastery of those Extended Indicators. Accordingly, the group recommended two adjustments to the *On Track/Level 2* scores. First, they recommended a 2-point adjustment of the *On Track/Level 2* cut score in grade 8 (from 18 to 16) and a 1-point adjustment of the *On Track/Level 2* cut score in grade 11 (from 17 to 18). These recommended adjustments were within the middle 50% of participants' cut score recommendations (i.e., the interquartile range) from their Round 3 judgments. In the workshop evaluation, all 12 participants from the upper-grade group indicated that they were either "confident" or "very confident" in these recommendations.

***On Track/Level 2 in grade 4.*** Participants also noted that the percent of students classified as *On Track/Level 2* and above in grade 4 (65%) was higher than in grades 3 and 5. When examining the trends in the impact data, participants noted that the percent of students classified as *On Track/Level 2* and above typically decreased or remained the same across grades. Participants indicated that this trend made sense, noting that the tested content was more concrete in lower grades and was more abstract in higher grades. Accordingly, the group recommended a 1-point adjustment in the *On Track/Level 2* cut score in grade 4 (from 14 to 15). This recommended adjustment was well within the interquartile range of participants' Round 3 judgments. In the workshop evaluation, all 10 participants from the lower-grade group indicated that they were either "confident" or "very confident" in this recommendation.

***CCR Benchmark/Level 1 in grade 6.*** Participants finished the discussion by reexamining their recommendations for grade 6, the grade level on which they had begun the workshop. Participants noted that the percent of students classified as *CCR Benchmark/Level 1* in grade 6 (22%) was higher than the analogous percentage in grade 5 (10%) or grade 7 (4%). Participants observed that the percentage of students classified as *CCR Benchmark/Level 1* started higher in grade 3, and tended to decline across grades to grade 11. (Participants noted that the percent of students classified as *CCR Benchmark/Level 1* was smaller in grade 7, but that this was expected because of a rise in content-based expectations reflected in the Extended Indicators for students in grade 7.) Participants also noted that this was the first grade they had examined during the standard setting, and their conceptualizations of students at the borderline between *Level 2* and *Level 1* had shifted somewhat during the process as they learned

more about the Extended Indicators and test items. Participants recommended a 3-point adjustment (from 24 to 27) in the *CCR Benchmark/Level 1* cut score for grade 6. This recommended adjustment was within the range of participants’ Round 3 judgments, and participants agreed that the adjusted cut score better reflected the content-based expectations for the student on the borderline between *On Track/Level 2* and *CCR Benchmark/Level 1*. In the workshop evaluation, 21 of 22 participants in the committee indicated that they were either “confident” or “very confident” in this recommendation. Overall, all participants indicated they would “agree” or “strongly agree” with the statements “I believe my opinions were considered and valued by my group,” and “My group’s work was reflected in the presentation of recommendations across grades.”

### Educators’ Recommendations

After the articulation discussion, participants were again shown a presentation of their final recommendations, incorporating their recommended adjustments. These recommendations are shown in Table 3. Note that the cut scores in Table 3 are expressed on the temporary test scale, not the final reporting scale.

Table 3. Educator-recommended cut scores and associated impact data for grades 3–8 & 11 NSCAS-AAM, as taken from the articulation discussion

Grade	Cut Scores as Number Correct		Cut Scores on Temporary Test Scale		Impact Data from Spring 2018			
	<i>On Track</i>	<i>CCR Benchmark</i>	<i>On Track</i>	<i>CCR Benchmark</i>	<i>Developing</i>	<i>On Track</i>	<i>CCR Benchmark</i>	<i>On Track or Above</i>
3	13	22	474	605	42.3%	39.4%	18.4%	57.8%
4	15	25	468	590	41.9%	42.9%	15.1%	58.0%
5	15	25	481	618	40.3%	49.7%	10.3%	60.0%
6	15	27	463	581	38.5%	52.7%	8.8%	61.5%
7	15	27	473	692	42.0%	53.2%	4.4%	57.6%
8	16	27	505	679	43.5%	49.5%	7.1%	56.6%
11	18	27	493	650	50.2%	42.7%	6.9%	49.6%

### Standard Errors Associated with Participants’ Final Recommendations

After the workshop, DRC placed participants’ recommended cut scores on the final test scale. To do so, linear interpolation was used to transform the scale-score cut-scores from Table 3 onto final scales. On the final scales, the *On Track/Level 2* cut score is always equal to 200, and the *CCR Benchmark/Level 1* cut score is different in each grade. The final, transformed cut scores have the same underlying meaning as those recommended by participating educators.

As future forms of the NSCAS-AAM are expected to be parallel to the forms used in spring 2018, these cut scores (on the scale score metric) are generalizable to these future forms.

The conditional standard error of measurement (CSEM) quantifies the amount of statistical uncertainty that surrounds any given point on the test scale, including the cut scores. If a student were to earn a given score on the test, it is expected that the student would have approximately a two-thirds chance of earning that same score, plus or minus one CSEM, if he or she were tested again.

Table 4 shows the recommended cut scores, as well as the CSEM associated with each cut score. The CSEM values are expressed on the scale score metric. The test scale for each test is independent: differences in scale scores of different grades are not meaningful. Further information about the creation of the test scale and of these error estimates can be found in the program technical report.

**Table 4. Recommended Cut Scores and Associated CSEM values for Grades 3–8 & 11 NSCAS-AAM**

Grade	Recommended Cut Scores (Scale Scores)		Associated CSEM values	
	<i>On Track</i>	<i>CCR Benchmark</i>	<i>On Track</i>	<i>CCR Benchmark</i>
<b>3</b>	200	252	11	16
<b>4</b>	200	250	11	14
<b>5</b>	200	252	11	14
<b>6</b>	200	267	11	18
<b>7</b>	200	283	12	22
<b>8</b>	200	270	12	19
<b>11</b>	200	256	11	18

### Final Approval of Cut Scores by NDE

After the workshop, NDE considered the participants’ recommended cut scores, as shown in Table 3. NDE noted that participants considered the content-based expectations for students, the proportions of students in each achievement level, and the items on the operational test forms.

After deliberation, the Nebraska State Board of Education approved the cut scores on August 3, 2018. Specifically, the Board approved the cut scores shown in Table 3, as presented on the temporary test scale. The final cut scores, shown in Table 1 and created by applying linear interpolation to the Board-approved cut scores, were used for operational score reporting soon thereafter.

## References

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## **B**

### Agenda

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**Nebraska Student-Centered Assessment System  
Alternate Assessment of Mathematics (NSCAS-AAM)  
Standard Setting Agenda**

**Monday, June 4, 2017**

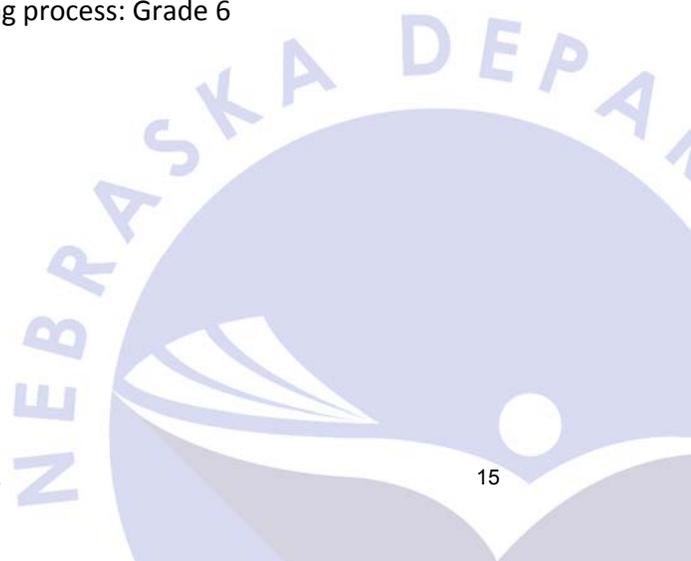
*(Times are approximate depending on work completion)*

8:00 – 8:30	Check-in and breakfast <i>Check-in is available starting at 8:00 and continues until the workshop begins at 8:30</i>
8:30 – 8:45	Welcome (NDE), introduction of staff, forms review
8:45 – 10:15	Standard setting training
10:30 – 11:30	Achievement level descriptors (ALDs) and standards review: Grade 6
11:30 – 12:30	Lunch <i>Just before lunch, table leaders meet for a brief review of roles and responsibilities</i>
12:30 – 1:00	Panelists take the operational test: Grade 6
1:00 – 2:30	Complete Round 1 of standard setting process: Grade 6
2:30 – 3:00	Presentation of Round 1 results and table discussion: Grade 6
3:00 – 4:00	Complete Round 2 of standard setting process: Grade 6



NSCAS-AAM  
Standard Setting Agenda

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**Tuesday, June 5, 2017**

*(Times are approximate depending on work completion)*

8:00 – 8:30	Check-in and breakfast <i>Check-in is available starting at 8:00 and continues until the workshop begins at 8:30</i>
8:30 – 9:00	Presentation of Round 2 results, impact data, and room discussion
9:00 – 9:45	Complete Round 3 of standard setting process: Grade 6
9:45 – 10:15	Revision of ALDs: Grade 6
10:30 – 11:30	ALDs and standards review: Grades 5 & 7 <i>The group will divide into two groups: the lower grade group and the upper grade group</i>
11:30 – 12:30	Lunch
12:30 – 1:00	Panelists take the operational test: Grades 5 & 7
1:00 – 2:00	Complete Round 1 of standard setting process: Grades 5 & 7
2:00 – 2:30	Presentation of Round 1 results and table discussion: Grades 5 & 7
2:30 – 3:00	Complete Round 2 of standard setting process: Grades 5 & 7
3:00 – 3:15	Presentation of Round 2 results, impact data, and room discussion
3:15 – 3:45	Complete Round 3 of standard setting process: Grades 5 & 7
3:45 – 4:00	Revision of ALDs: Grades 5 & 7



**Wednesday, June 6, 2017**

*(Times are approximate depending on work completion)*

8:00 – 8:30	Check-in and breakfast <i>Check-in is available starting at 8:00 and continues until the workshop begins at 8:30</i>
8:30 – 9:30	ALDs and standards review: Grades 4 & 8
9:30 – 10:30	Panelists take the operational test: Grades 4 & 8
10:30 – 11:30	Complete Round 1 of standard setting process: Grades 4 & 8
11:30 – 12:30	Lunch
1:00 – 1:15	Presentation of Round 1 results and table discussion: Grades 4 & 8
1:15 – 2:00	Complete Round 2 of standard setting process: Grades 4 & 8
2:00 – 2:30	Presentation of Round 2 results, impact data, and room discussion
2:30 – 3:30	Complete Round 3 of standard setting process: Grades 4 & 8
3:30 – 4:00	Revision of ALDs: Grades 4 & 8



**Thursday, June 7, 2017**

*(Times are approximate depending on work completion)*

8:00 – 8:30	Check-in and breakfast <i>Check-in is available starting at 8:00 and continues until the workshop begins at 8:30</i>
8:30 – 9:15	ALDs and standards review: Grades 3 & 11
9:15 – 10:00	Panelists take the operational test: Grades 3 & 11
10:00 – 11:00	Complete Round 1 of standard setting process: Grades 3 & 11
11:00 – 11:30	Presentation of Round 1 results and table discussion: Grades 3 & 11
11:30 – 12:30	Lunch
12:30 – 1:45	Complete Round 2 of standard setting process: Grades 3 & 11
1:45 – 2:15	Presentation of Round 2 results, impact data, and room discussion
2:15 – 3:30	Complete Round 3 of standard setting process: Grades 3 & 11
3:30 – 4:00	Revision of ALDs: Grades 3 & 11; Vertical articulation discussion (if necessary) <i>Facilitators will advise participants on the room assignment for the vertical articulation discussion, if necessary</i>



# C

## Training Presentation and Materials

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**NEBRASKA**  
DEPARTMENT OF EDUCATION

## **NSCAS-AAM** Standard Setting Training

June 4, 2018 • Lincoln, NE

### **Welcome**

- Nebraska Department of Education (NDE)
  - Dr. Valorie Foy, *Director of Assessment*
  - Jeremy Heneger, *Assistant Director of Assessment*
  - Sharon Heater, *Assessment: Students with Disabilities*
  - Deb Romanek, *Mathematics Content Area Specialist*



## Introductions

- Data Recognition Corporation (DRC)
  - Rick Mercado
  - Jess Smith
  - Bonnie Wright
  - Eric Jenson
  - Liliana Martinez-Criego
  - Sara Kendall
  - Lee McKenna
  - John Born



## Important Forms

- Complete and sign the **Confidentiality Form** and **Participant Survey**.
  - Forms will be collected at the end of this session.
  - Complete and return the other forms in your folder during or after this meeting.



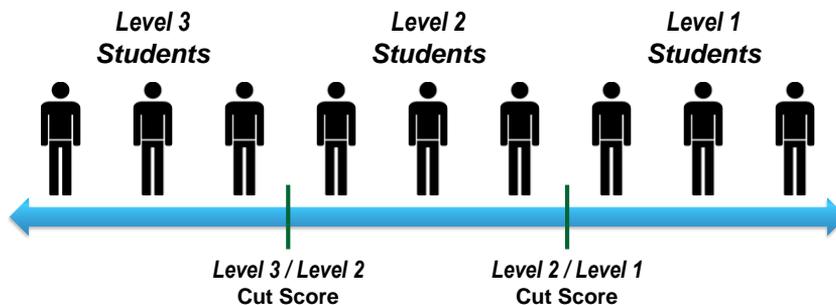
## Workshop Goal

- To recommend cut scores that categorize students into one of three achievement levels:
  - *Level 3*
  - *Level 2*
  - *Level 1*



## Cut Scores & Achievement Levels

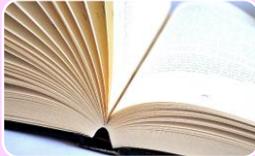
- Two cut scores classify students into three achievement levels.



## Angoff Yes/No Procedure



**Item-  
centered  
method**



**Content-  
based  
decisions**



**Iterative  
process**



DATA RECOGNITION  
**DRC**  
CONSORTIUM

## Take the Test

- By taking the test, you will better understand students' testing experience on test day.



DATA RECOGNITION  
**DRC**  
CONSORTIUM

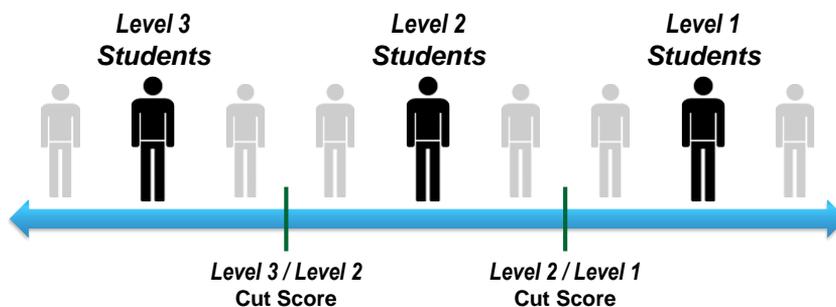
## Achievement Level Descriptors

- ALDs describe the knowledge, skills, and abilities expected of students in each achievement level.
  - They are linked to the state content standards.
  - ALDs describe students in the middle of each level, not on the borderlines.



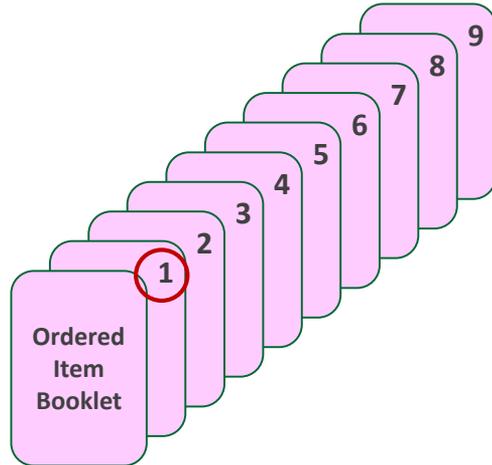
## ALDs and Achievement Levels

- ALDs describe the student in the middle of each achievement level.



## Ordered Item Booklet (OIB)

- The OIB comprises items from the spring test.
  - One item per page
  - Easiest item first
  - Hardest item last
  - Items ascend in difficulty as based on student performance



## Two Borderline Students

- Borderline students are those just barely leaving one level and entering the next level.
  - The ALDs do *not* describe these students directly.
  - There are two borderline students.

Borderline  
Level 3 / Level 2  
**Student**

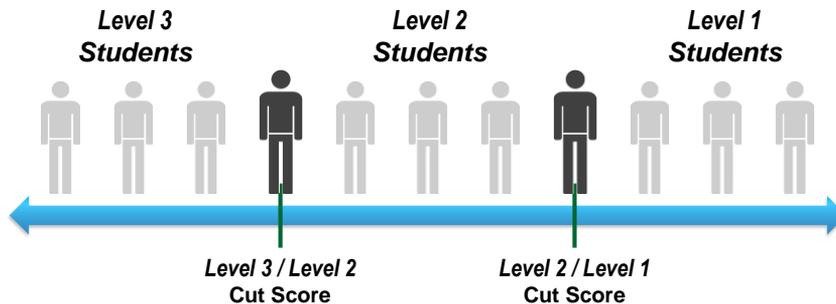


Borderline  
Level 2 / Level 1  
**Student**



## Two Borderline Students

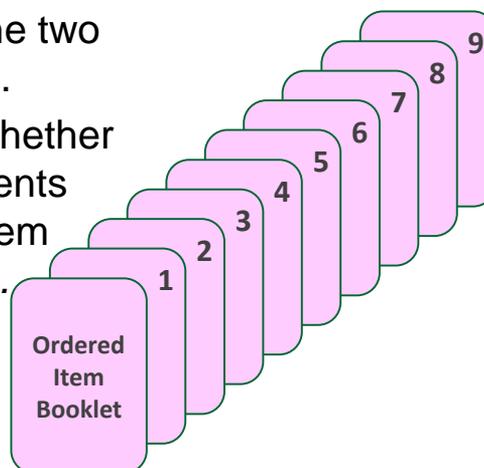
- Angoff Yes/No judgments and cut scores are linked to the student *just* in each level.



DATA RECOGNITION  
**DRC**  
CONFEDERATION

## Borderline Students and the OIB

- You will consider the two borderline students.
- You will consider whether the borderline students can answer each item correctly, *yes or no*.
- Cut scores will be calculated from your judgments.



DATA RECOGNITION  
**DRC**  
CONFEDERATION

## Three Rounds

### Round 1

Study OIB and make your own Angoff Yes/No judgments

Discuss your judgments with your table

### Round 2

On your own, make your own Angoff Yes/No judgments

Discuss your judgments with table, then room, and see impact

### Round 3

On your own, make your own Angoff Yes/No judgments

Then move on to the next grade



DATA RECOGNITION  
**DRC**  
CERTIFICATION

## Roles and Responsibilities

- You will make recommendations to NDE regarding the achievement standards.
- During the workshop, remember to:
  - Contribute to discussions at your table
  - Participate in group-wide discussions
  - Make your Angoff judgments independently
  - Ask a member of staff any questions
  - Use workshop materials only in meeting rooms
  - Keep workshop conversations confidential



DATA RECOGNITION  
**DRC**  
CERTIFICATION

## Security

- Your facilitators will collect your materials each afternoon.
- Please leave the workshop materials in the meeting rooms at all times.
- Do *not* discuss the contents of the materials outside your meeting room.
- You are welcome to use phones, tablets, and laptops in the lunchroom and hallways.
- Please do *not* use these items in the meeting rooms at any time.



## Training Materials

- Achievement Level Descriptors (ALDs)
- Sample Ordered Item Booklet (OIB)
- Item Information Sheet
- Item Separation Chart
- Angoff Rating Form



# Item Information Sheet

NSCAS-AAM Standard Setting

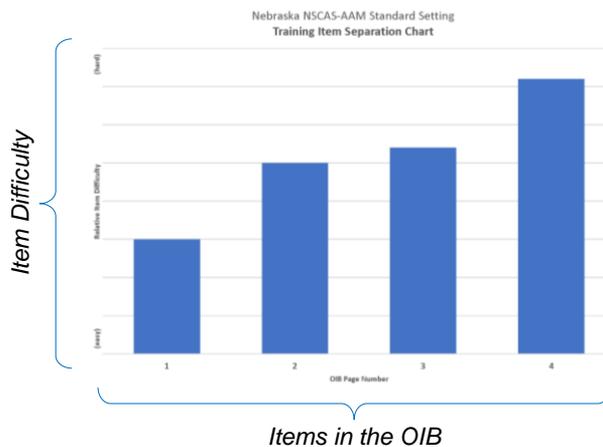
Name: \_\_\_\_\_

## Item Information Sheet *for Training*

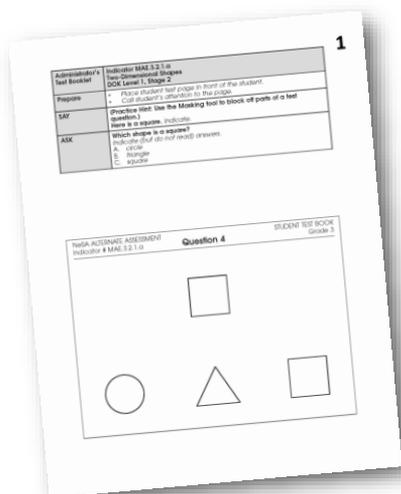
OIB Page	Type	Key	Indicator	Training Round		Round 2		Round 3		Notes
				3/2	2/1	3/2	2/1	3/2	2/1	
1	MC	C	3.2.1.a							
2	MC	C	3.4.2.a							
3	MC	B	3.1.1.a							
4	MC	A	3.1.1.g							



# Example: Item Separation Chart



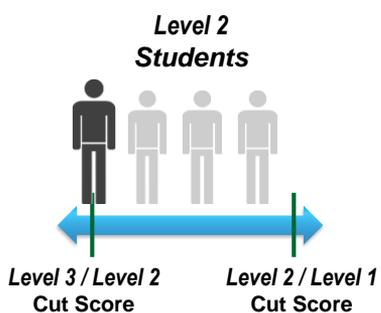
## Examining an Item



- Make a brief note to yourself about what the item measures.
- Ask yourself if the borderline student would be expected to answer the item correctly.
- Record your “Yes” or “No” judgment on your Item Information Sheet.



## Items and the Borderline Student

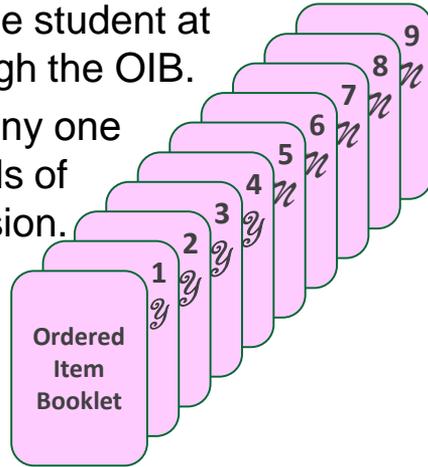


- Remember to consider the borderline student, not the student in the middle of the achievement level.
  - For example, would the student on the borderline of *Level 3* and *Level 2* be expected to answer the question correctly?



## Tips on Studying the OIB

- Consider one borderline student at a time as you go through the OIB.
- Don't get hung up on any one item: you have 3 rounds of judgments and discussion.
- Students in a higher level are expected to answer items from lower levels.



DATA RECOGNITION  
**DRC**  
CONFEDERATION

## Recording Your Angoff Judgments

OIB Page	Type	Key	Indicator	Training Round	
				3/2	2/1
1	MC	C	3.2.1.a	Yes	Yes
2	MC	C	3.4.2.a	Yes	Yes
3	MC	B	3.1.1.a	No	Yes
4	MC	A	3.1.1.g	No	No

- For each item, indicate whether *each borderline student* would be expected to answer the item correctly.



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**DRC**  
CONFEDERATION

## Transferring Your Angoff Judgments

- Then add up your “Yes” judgments for each borderline student.
- Record these sums on the *rating form*.

TRAINING

Like this: ● Not like this: ○

	Level 3 / Level 2		Level 2 / Level 1	
	0	2	0	3
0	●	○	●	○
1	○	○	○	○
2	○	●	○	○
3	○	○	○	○
4	○	○	○	○
5	○	○	○	○
6	○	○	○	○
7	○	○	○	○
8	○	○	○	○
9	○	○	○	○



DATA RECOGNITION  
**DRC**  
CONSORTIUM

## Pacing

- Some people will take longer than others to study the test items and make their Angoff judgments.
  - During conversations, please be considerate of others at your table and in the room.
  - If you finish earlier than your neighbors, you may wish to check-in with your facilitator, leave your materials at your table, and take a short break.



DATA RECOGNITION  
**DRC**  
CONSORTIUM

NSCAS-AAM Standard Setting

## PRACTICE EXERCISE



### Focus on the First Borderline Student

- Review the ALDs for *Level 3* and *Level 2*.
  - Consider the student who is on the borderline between *Level 3* and *Level 2*.
  - What knowledge, skills, and understandings would you expect of this borderline student?
- Then review the sample test items.



## Examine Items Using Item Info Sheet

- For each item...

- Consider what the item measures.
- Ask yourself if the borderline *Level 3 / Level 2* student would be expected to answer the item correctly.
- Write “Yes” or “No” in the *3/2* column of the Item Info Sheet.

OIB Page	Type	Key	Indicator	Training Round	
				3/2	2/1
1	MC	C	3.2.1.a	Yes	
2	MC	C	3.4.2.a	Yes	
3	MC	B	3.1.1.a	No	
4	MC	A	3.1.1.g	No	



## Repeat the Process

- Now complete the *Level 2 / Level 1* judgment for all four items.

- Remember the steps:

1. Review the ALDs for *Level 2* and *Level 1*
2. Consider the content-based expectations for the borderline *Level 2 / Level 1* student
3. Review the test items
4. Ask yourself whether the borderline student would be expected to answer the item correctly
5. Write “Yes” and “No” judgments on the Item Information Sheet under *2/1*



## Review Your Item Info Sheet

- After you have studied the items, look over your judgments.
  - If you expect the *Level 3/2* borderline student to answer an item correctly, you should also expect the *Level 2/1* to answer the item correctly.
  - It's okay if you don't expect *either* borderline student to answer some items correctly.

Training Round	
3/2	2/1
Yes	Yes
Yes	Yes
No	Yes
No	No

↓                      ↓  
**2**                      **3**  
*yesses*                *yesses*



DATA RECOGNITION  
**DRC**  
CONSORTIUM

## Transfer Your Yes/No Judgments

- Add up the number of “Yes” judgments you made for:
  - The *Level 3/2* borderline student
  - The *Level 2/1* borderline student
- Transfer these sums to the rating form.



DATA RECOGNITION  
**DRC**  
CONSORTIUM

## Practice Exercise

Any questions?

*If not, please complete the training exercise.*



## Feedback Following Rounds

- You will receive feedback following Rounds 1 and 2.
- You will discuss the results at your table following Rounds 1 and 2.
- You will present table results to the room and discuss results as a room.



## Example: Round 1 Feedback

Participant Number	Level 3/2	Level 2/1
1	12	18
2	12	19
3	14	18
4	13	17
5	11	18
6	12	18
7	14	18
<b>Median</b>	<b>12</b>	<b>18</b>



## Discussion of Round 1 Judgments

- In the actual workshop, you will discuss your Round 1 judgments at your table.
- Feel free to discuss:
  - Your Angoff Yes/No judgments
  - Items where you had a hard time making a judgment
- After discussion, you will have a second opportunity to make Angoff judgments.
  - You can change any, all, or none of your judgments.
  - Making Angoff judgments is an individual activity.



## Suggestions for Discussions

- Practice active listening.
- Be open to changing your mind.
- Work to understand your colleagues' rationales for their Angoff judgments.
- In a respectful manner, feel free to ask questions of your colleagues.
- Do *not* discuss your judgments until everyone at the table has made theirs.
- Keep the contents of your discussions private.



## Example: Round 2 Feedback

Participant Number	Level 3/2	Level 2/1
1	12	18
2	12	19
3	12	18
4	13	18
5	11	17
6	12	18
7	14	18
<b>Median</b>	<b>12</b>	<b>18</b>
Level 3	Level 2	Level 1
0.0%	0.0%	0.0%



## Workshop Structure

1. Study ALDs and Standards
2. Take the test
3. Study OIB and make Round 1 judgments
4. Discuss Round 1 at tables
5. Study OIB Make Round 2 judgments
6. Discuss Round 2 at table and as a group
7. Study OIB Make Round 3 judgments
8. Move on to next grade



## Order of Grades to be Considered

Order	Lower-grade Group	Upper-grade Group
First	Everyone works on Grade 6	
Second	Work on Grade 5	Work on Grade 7
Third	Work on Grade 4	Work on Grade 8
Fourth	Work on Grade 3	Work on Grade 11



## Readiness Form

- Please take a few moments to complete the Readiness Form.
- When complete, please hand in to a facilitator.
- We will address any questions you have before we move on to the review of the standards and the ALDs.



NSCAS-AAM Standard Setting

**ANY QUESTIONS?**

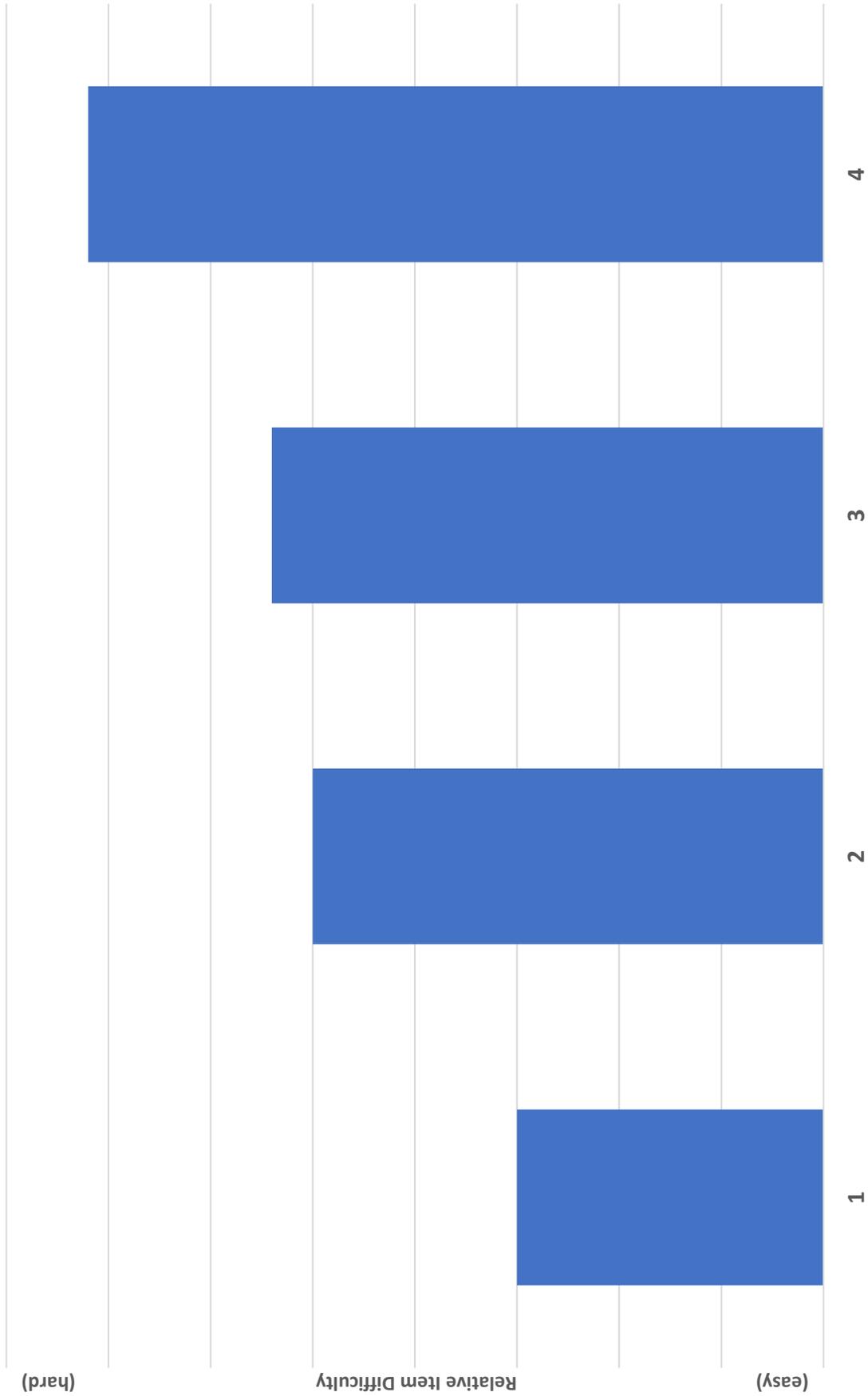


Name: \_\_\_\_\_

## Item Information Sheet for Training

OIB Page	Type	Key	Indicator	Training Round		Round 2		Round 3		Notes
				3/2	2/1	3/2	2/1	3/2	2/1	
1	MC	C	3.2.1.a							
2	MC	C	3.4.2.a							
3	MC	B	3.1.1.a							
4	MC	A	3.1.1.g							

# Nebraska NSCAS-AAM Standard Setting Training Item Separation Chart



**Grade**

- 3
- 4
- 5
- 6
- 7
- 8
- 11

**Please write the number of your Yes judgments on the lines and fill the appropriate bubbles.**

Like this: ● Not like this: (✓) (X) (1)

**TRAINING**

**Level 3 / Level 2**

**Level 2 / Level 1**

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

- |       |       |
|-------|-------|
| _____ | _____ |
| ①     | ①     |
| ①     | ①     |
| ②     | ②     |
|       | ③     |
|       | ④     |
|       | ⑤     |
|       | ⑥     |
|       | ⑦     |
|       | ⑧     |
|       | ⑨     |

- |       |       |
|-------|-------|
| _____ | _____ |
| ①     | ①     |
| ①     | ①     |
| ②     | ②     |
|       | ③     |
|       | ④     |
|       | ⑤     |
|       | ⑥     |
|       | ⑦     |
|       | ⑧     |
|       | ⑨     |

**Content**

- Math

**Table**

- 1
- 2
- 3
- 4
- 5

**ROUND 2**

**Level 3 / Level 2**

**Level 2 / Level 1**

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

- |       |       |
|-------|-------|
| _____ | _____ |
| ①     | ①     |
| ①     | ①     |
| ②     | ②     |
|       | ③     |
|       | ④     |
|       | ⑤     |
|       | ⑥     |
|       | ⑦     |
|       | ⑧     |
|       | ⑨     |

- |       |       |
|-------|-------|
| _____ | _____ |
| ①     | ①     |
| ①     | ①     |
| ②     | ②     |
|       | ③     |
|       | ④     |
|       | ⑤     |
|       | ⑥     |
|       | ⑦     |
|       | ⑧     |
|       | ⑨     |

**OIB Number**

- |       |       |
|-------|-------|
| _____ | _____ |
| ①     | ①     |
| ①     | ①     |
| ②     | ②     |
| ③     | ③     |
|       | ④     |
|       | ⑤     |
|       | ⑥     |
|       | ⑦     |
|       | ⑧     |
|       | ⑨     |

**ROUND 3**

**Level 3 / Level 2**

**Level 2 / Level 1**

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

- |       |       |
|-------|-------|
| _____ | _____ |
| ①     | ①     |
| ①     | ①     |
| ②     | ②     |
|       | ③     |
|       | ④     |
|       | ⑤     |
|       | ⑥     |
|       | ⑦     |
|       | ⑧     |
|       | ⑨     |

- |       |       |
|-------|-------|
| _____ | _____ |
| ①     | ①     |
| ②     | ②     |
|       | ③     |
|       | ④     |
|       | ⑤     |
|       | ⑥     |
|       | ⑦     |
|       | ⑧     |
|       | ⑨     |

# NSCAS-AAM Standard Setting

June 4–6, 2018

## Angoff Yes/No Readiness Form

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Please indicate your responses to statements 1–7, then sign at the bottom of the form.

	Yes	No
1. I understand the <b>goals of the standard setting meeting</b> .	<input type="radio"/>	<input type="radio"/>
2. I understand the <b>Angoff Yes/No procedure</b> .	<input type="radio"/>	<input type="radio"/>
3. I understand the <b>ordered item booklet (OIB)</b> .	<input type="radio"/>	<input type="radio"/>
4. I understand the <b>item information sheet</b> .	<input type="radio"/>	<input type="radio"/>
5. I understand the <b>item separation chart</b> .	<input type="radio"/>	<input type="radio"/>
6. I understand how to use the <b>achievement level descriptors (ALDs)</b> to make my Yes/No judgments.	<input type="radio"/>	<input type="radio"/>
7. I have <b>completed the training</b> and I understand <b>what I need to do</b> to make my Yes/No judgments.	<input type="radio"/>	<input type="radio"/>

If you answered *No* to any of the statements above, please raise your hand and ask your facilitator for additional help or training.

**Note:** You only need to answer question 8 if you said *No* to any of the questions above.

	Yes	No
8. I have received <b>additional training</b> and I understand what I need to do to make my Yes/No judgments.	<input type="radio"/>	<input type="radio"/>

---

Print Name

---

Signature

**1. I understand the goals of the standard setting meeting.**

Response	Frequency	Percent	Mean: 1.00
Yes	22	100.00	<div style="width: 100%; height: 10px; background-color: #0056b3;"></div>
No	0	0.00	<div style="width: 0%; height: 10px; background-color: #0056b3;"></div>

**3. I understand the ordered item booklet (OIB).**

Response	Frequency	Percent	Mean: 1.00
Yes	22	100.00	<div style="width: 100%; height: 10px; background-color: #0056b3;"></div>
No	0	0.00	<div style="width: 0%; height: 10px; background-color: #0056b3;"></div>

**5. I understand the item separation chart.**

Response	Frequency	Percent	Mean: 1.00
Yes	22	100.00	<div style="width: 100%; height: 10px; background-color: #0056b3;"></div>
No	0	0.00	<div style="width: 0%; height: 10px; background-color: #0056b3;"></div>

**7. I have completed the training and I understand what I need to do to make my Yes/No judgments.**

Response	Frequency	Percent	Mean: 1.00
Yes	22	100.00	<div style="width: 100%; height: 10px; background-color: #0056b3;"></div>
No	0	0.00	<div style="width: 0%; height: 10px; background-color: #0056b3;"></div>

**2. I understand the Angoff Yes/No procedure.**

Response	Frequency	Percent	Mean: 1.00
Yes	22	100.00	<div style="width: 100%; height: 10px; background-color: #0056b3;"></div>
No	0	0.00	<div style="width: 0%; height: 10px; background-color: #0056b3;"></div>

**4. I understand the item information sheet.**

Response	Frequency	Percent	Mean: 1.00
Yes	22	100.00	<div style="width: 100%; height: 10px; background-color: #0056b3;"></div>
No	0	0.00	<div style="width: 0%; height: 10px; background-color: #0056b3;"></div>

**6. I understand how to use the achievement level descriptors (ALDs) to make my Yes/No judgments.**

Response	Frequency	Percent	Mean: 1.00
Yes	22	100.00	<div style="width: 100%; height: 10px; background-color: #0056b3;"></div>
No	0	0.00	<div style="width: 0%; height: 10px; background-color: #0056b3;"></div>

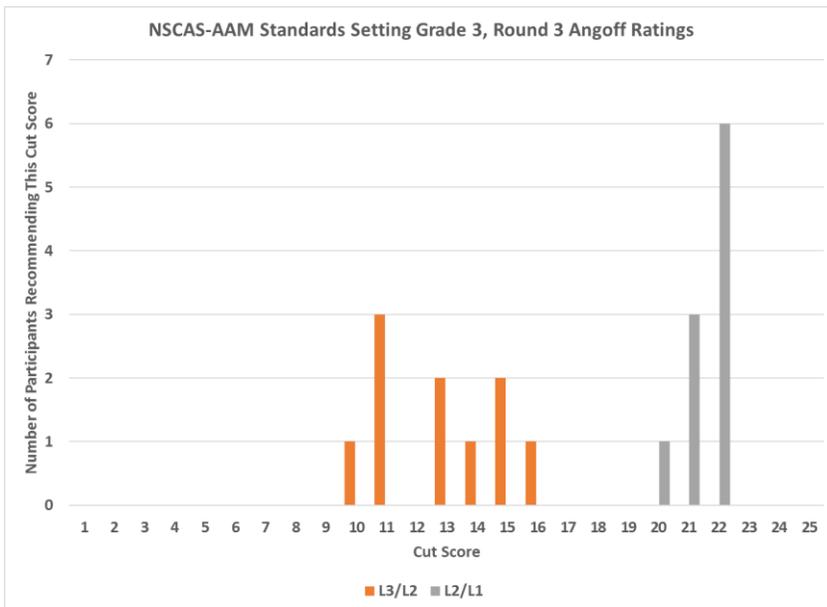
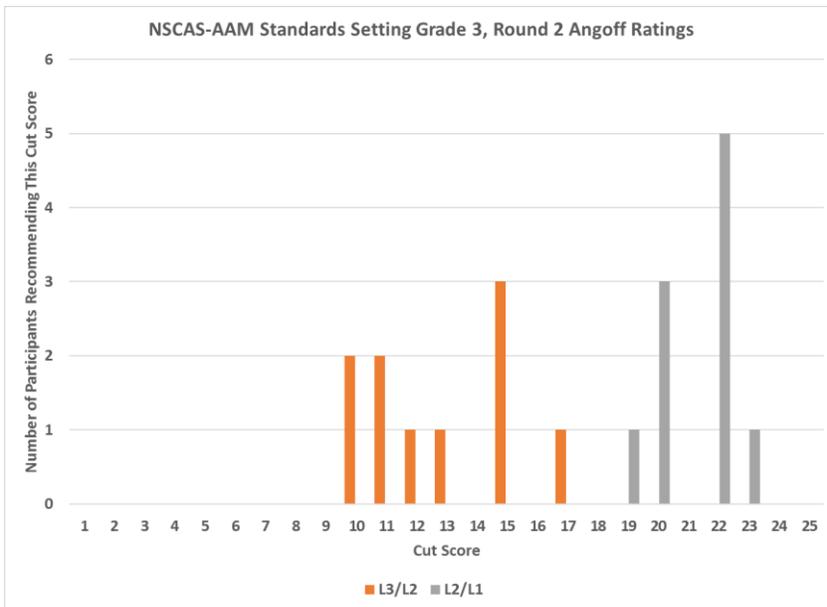
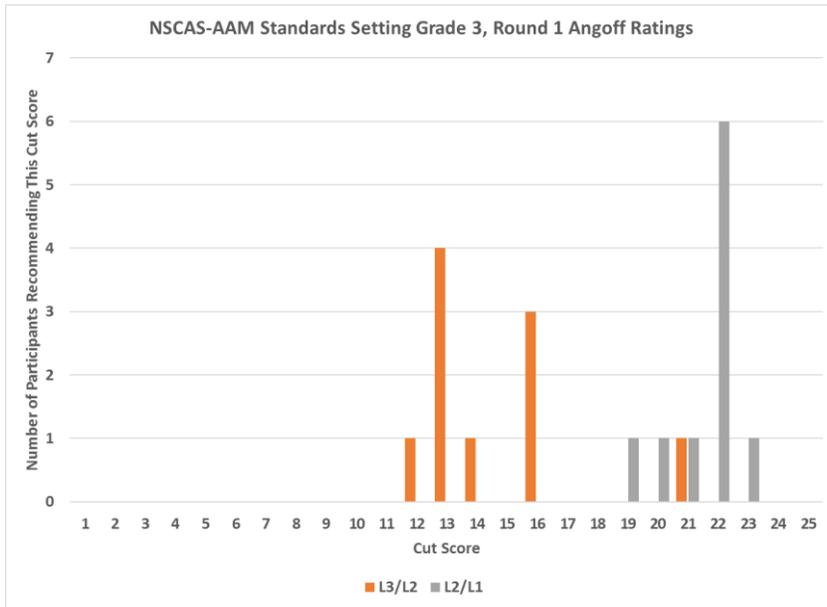
**8. I have received additional training and I understand what I need to do to make my Yes/No judgments.**

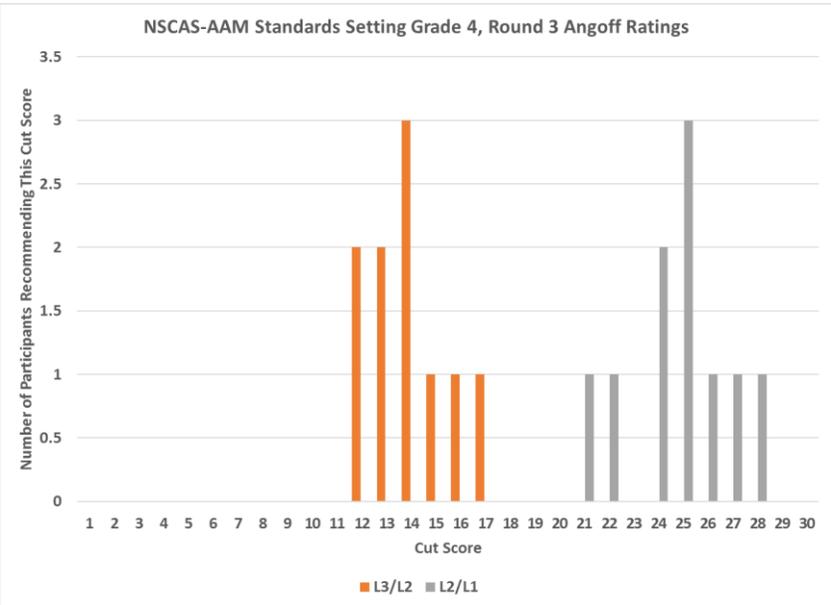
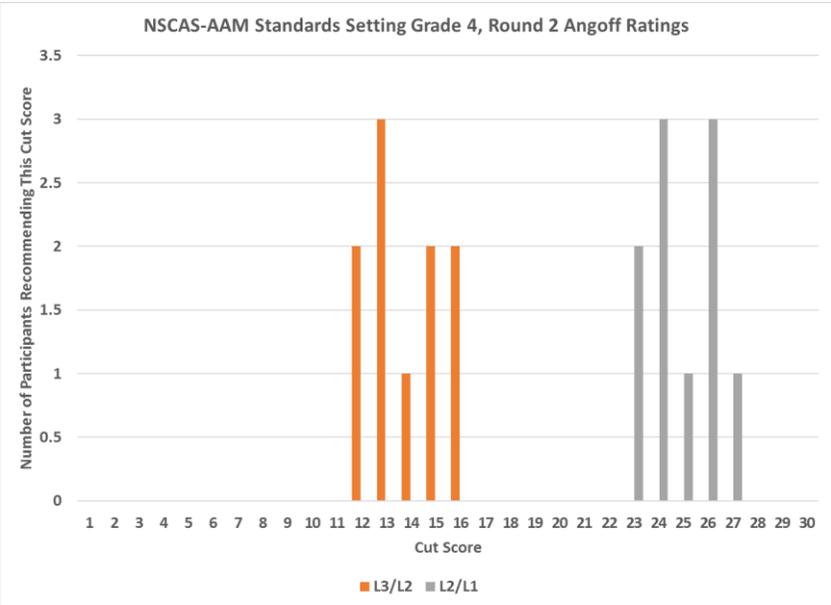
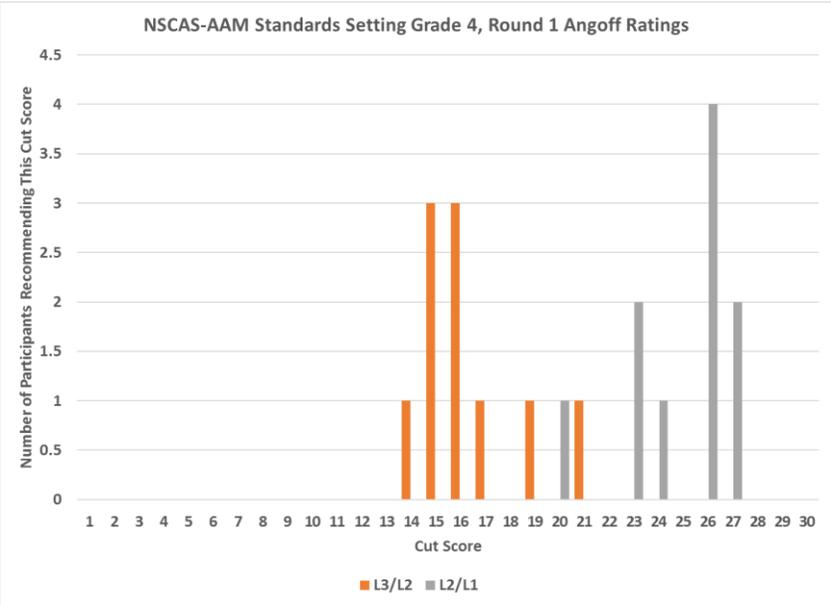
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No	0	0.00	<div style="width: 0%; height: 10px; background-color: #0056b3;"></div>
No Response	21	95.45	<div style="width: 95.45%; height: 10px; background-color: #0056b3;"></div>

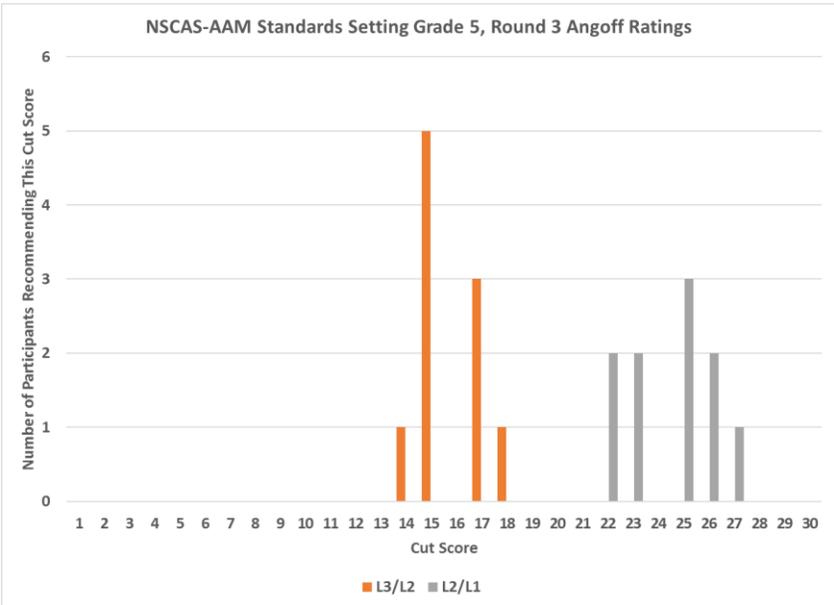
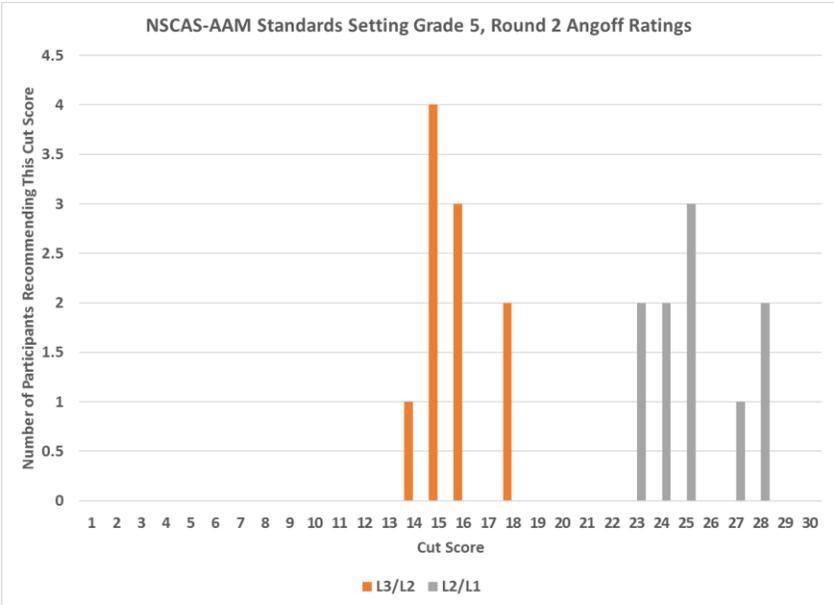
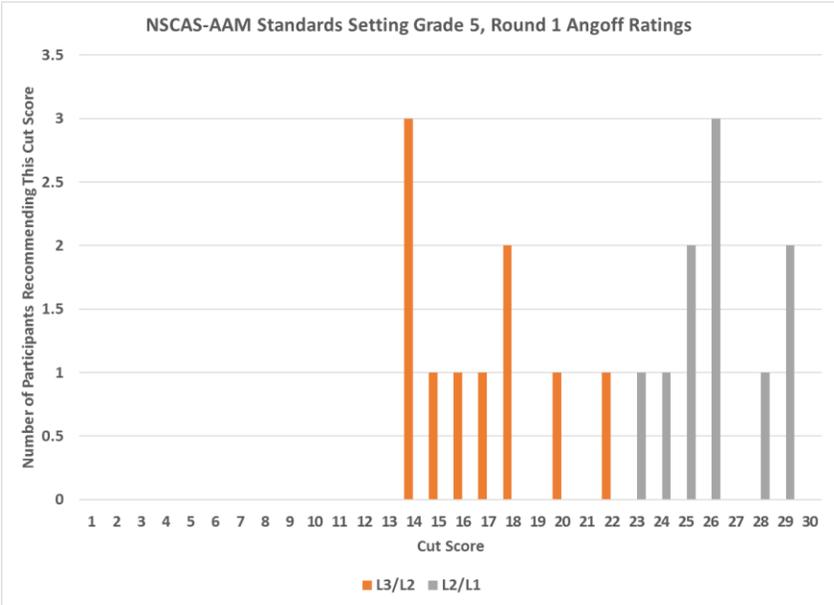
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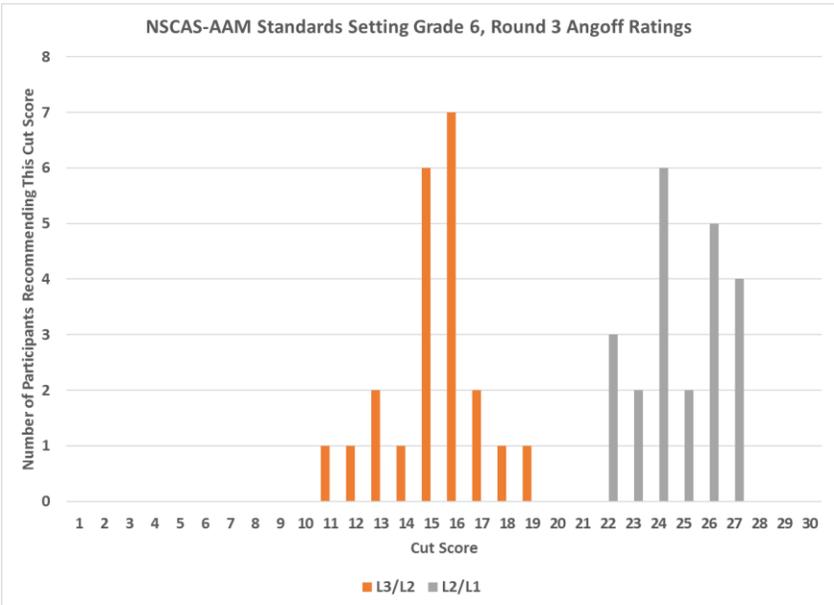
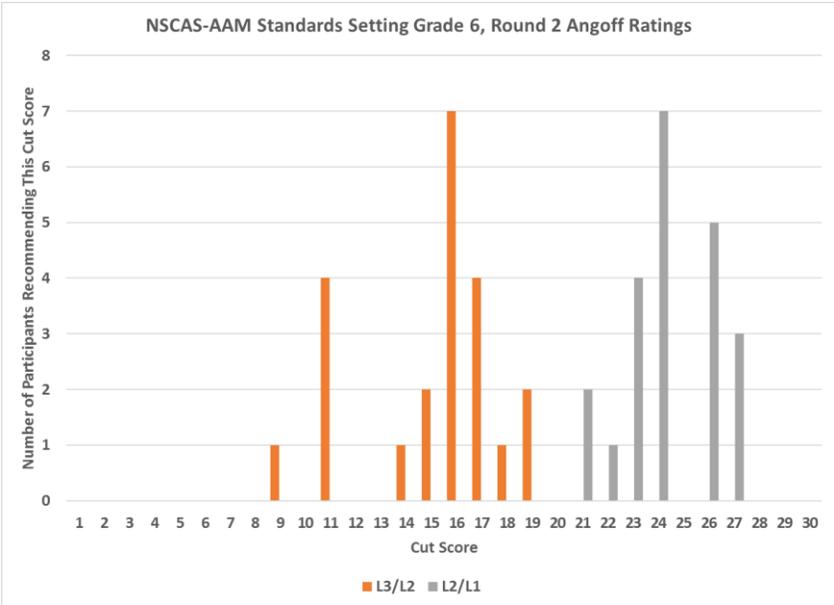
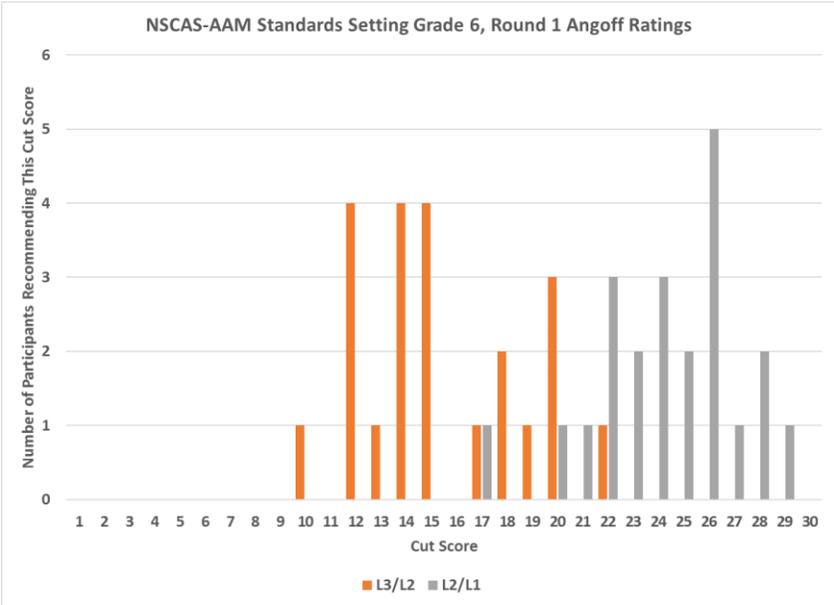
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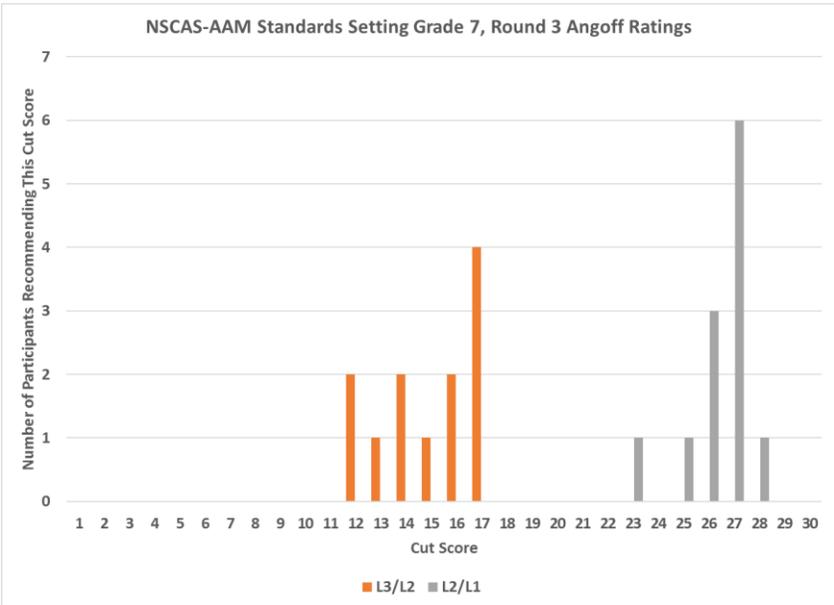
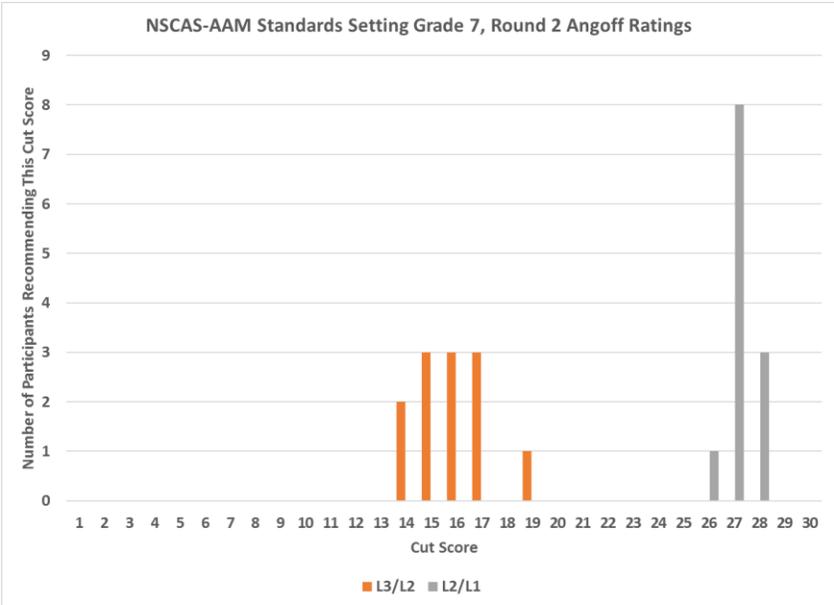
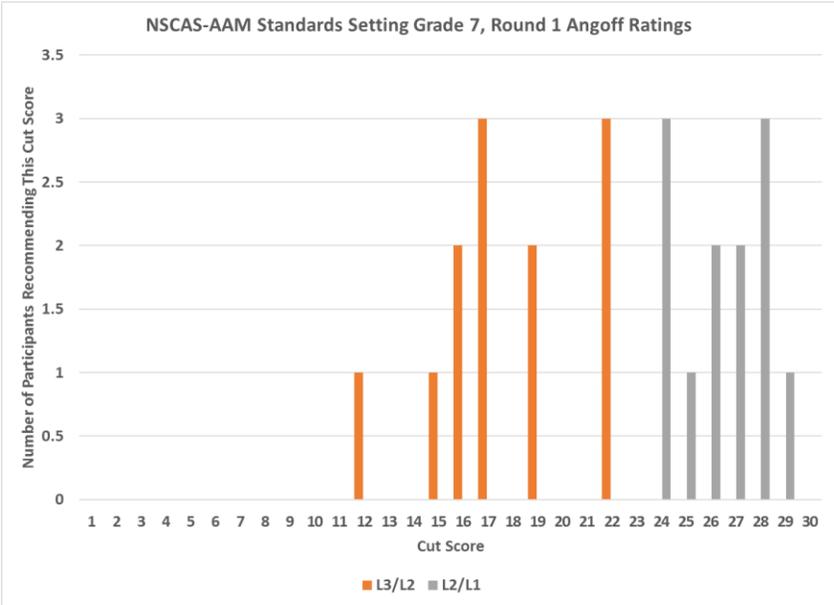
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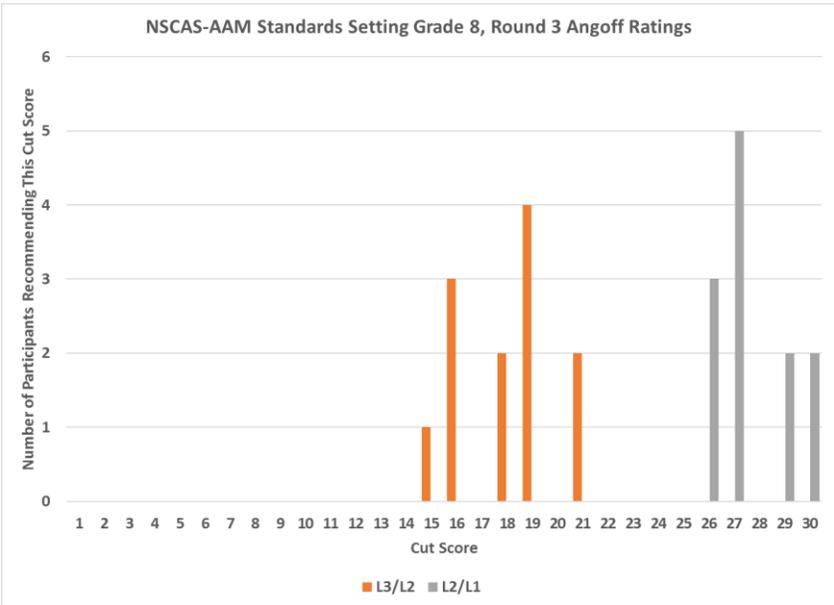
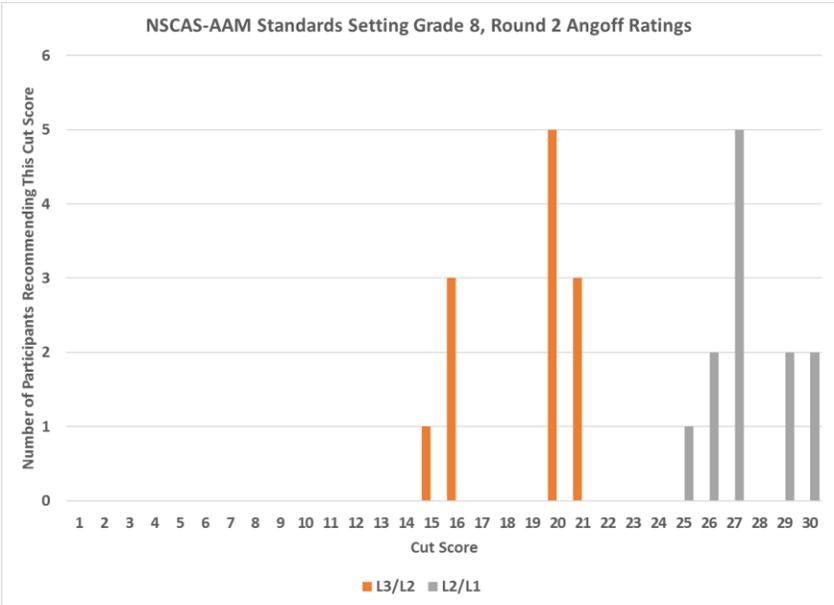
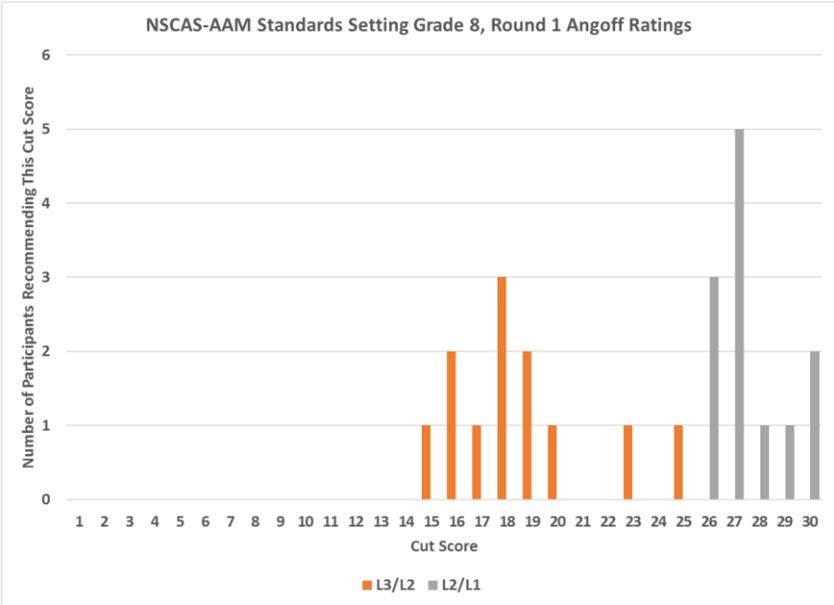


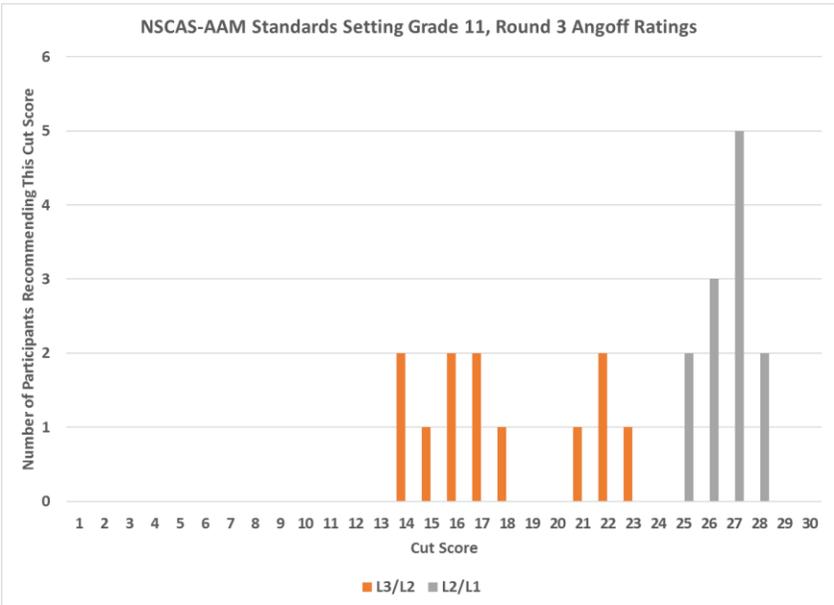
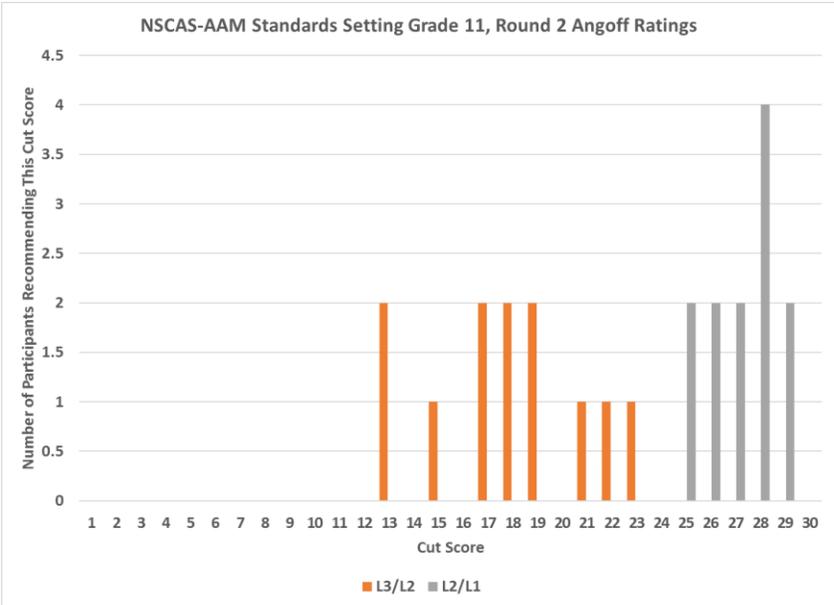
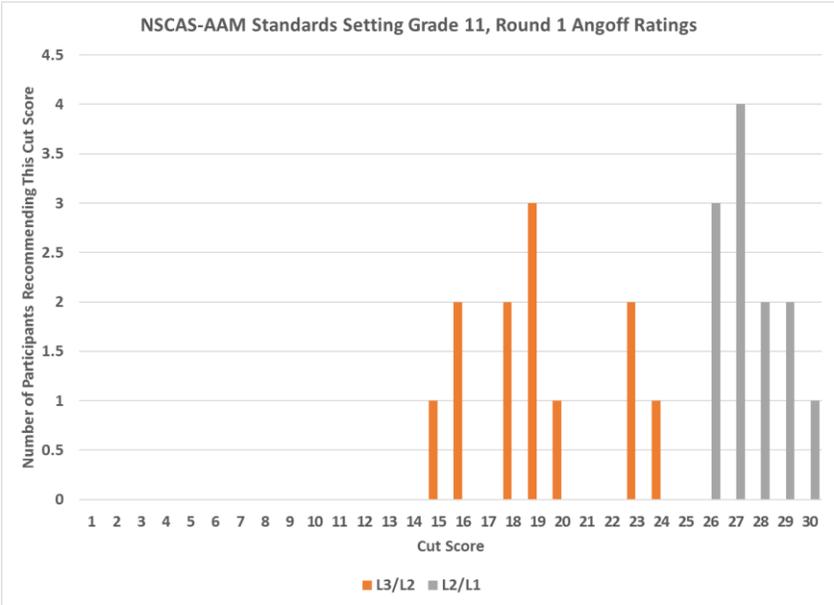












## **E**

### Panelists' Demographic Survey Results

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# Participant Survey

Thank you for completing this survey. We gather this information to demonstrate the level of expertise of the participants at our standard setting events. When done, please return your survey to a facilitator.

## 1. What is your gender?

- Female
- Male

## 2. What is your ethnicity?

- American Indian/Alaska Native
- Asian
- Hawaiian or Pacific Islander
- Black
- Hispanic
- Mixed (Two or more races)
- Caucasian

## 3. What is your current assignment?

- Classroom teacher
- Educator, non-teacher
- Higher education
- Other (please describe):

\_\_\_\_\_

## 4. To what group have you been assigned at the workshop?

- Grades 3–6 Math
- Grades 6–8 and 11 Math

## 5. How many years, in total, have you been teaching?

- Fewer than 5 years
- 5–10 years
- 11–15 years
- 16–20 years
- 21–25 years
- More than 25 years

## 6. What is your highest level of education?

- High school diploma
- Bachelor's degree
- Bachelor's degree + Hours
- Master's degree
- Master's degree + Hours
- Doctoral degree

## 7. What is your work setting?

- Urban
- Suburban
- Rural

## 8. Which of these groups do you have experience teaching?

- Special education (in a self-contained classroom)
- Special education (in a mainstream classroom)
- English language learners
- Vocational education
- Alternative education

## 9. In which grades (and for how many years) have you taught?

*Example: Grade 8 (5 years)*

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 10. What professional development have you taken or experienced in the last two years?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### 1. What is your gender?

Response	Frequency	Percent	Mean: 1.00
Female	22	100.00	
Male	0	0.00	

### 2. What is your ethnicity?

Response	Frequency	Percent	Mean: 6.86
American Indian/Alaska Native	0	0.00	
Asian	0	0.00	
Hawaiian or Pacific Islander	0	0.00	
Black	1	4.55	
Hispanic	0	0.00	
Mixed Two or more races	0	0.00	
Caucasian	21	95.45	

### 3. What is your current assignment?

Response	Frequency	Percent	Mean: 1.00
Classroom teacher	22	100.00	
Educator non-teacher	0	0.00	
Higher education	0	0.00	
Other	0	0.00	

### 4. To what group have you been assigned at the workshop?

Response	Frequency	Percent	Mean: 1.55
Grades 3-6 Math	10	45.45	
Grades 6-8 and 11 Math	12	54.55	

### 5. How many years, in total, have you been teaching?

Response	Frequency	Percent	Mean: 2.91
Fewer than 5 years	6	27.27	
5-10 years	5	22.73	
11-15 years	4	18.18	
16-20 years	2	9.09	
21-25 years	2	9.09	
More than 25 years	3	13.64	

### 6. What is your highest level of education?

Response	Frequency	Percent	Mean: 3.86
High school diploma	0	0.00	
Bachelor's degree	1	4.55	
Bachelor's degree + Hours	10	45.45	
Master's degree	2	9.09	
Master's degree + Hours	9	40.91	
Doctoral degree	0	0.00	

**7. What is your work setting?**

Response	Frequency	Percent	Mean: 2.05
Urban	7	31.82	
Suburban	7	31.82	
Rural	8	36.36	

**8. Which of these groups do you have experience teaching?**

Response	Frequency	Percent	Mean: -
Special education in a self-contained classroom	18	81.82	
Special education in a mainstream classroom	19	86.36	
English language learners	3	13.64	
Vocational education	2	9.09	
Alternative education	3	13.64	

## **F**

### Achievement Level Descriptors

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## Grade 3 Achievement Level Descriptors

### Nebraska Math Alternate Assessment

		Level 1	
		Level 2	Level 1
<p>Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>Recognize equivalent representations of whole numbers up to 20, including visual models, standard form, and word form.</li> <li>Recognize a set of ordered whole numbers, 1–20.</li> <li>Recognize a number closer to a given number on a number line, 1–20.</li> <li>Identify halves or wholes on a number line.</li> </ul>	<p>Established learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>Read, write, and demonstrate whole numbers up to 20 that are equivalent representations, including visual models, standard form, and word form.</li> <li>Compare and order whole numbers, 1–20.</li> <li>Identify a number closer to a given number on a number line, 1–20.</li> <li>Represent halves and wholes on a number line.</li> </ul>	<p>Distinguished learners demonstrate advanced proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>Translate between equivalent representations of whole numbers up to 20, including visual models, standard form, and word form.</li> <li>Compare and order whole numbers, 1–20, in real-world problems.</li> <li>Identify a number closer to a given number, 1–20.</li> <li>Translate between number line representations of halves and wholes and their numeric representations.</li> </ul>	

**Level 3****Level 2****Level 1**

- Given a model, identify a whole number (1–3) as a fraction with a denominator of 2 or 4.
- Recognize parts of a set as one-half, one-fourth, or the whole of the set, limited to four objects.
- Recognize unit fractions one-half, one-third, and one-fourth using a model.
- Recognize the sum or difference through 10, without regrouping.
- Recognize multiplication as repeat addition with a product no greater than 10 using a model.
- Identify the product of multiplying one or two by ten or twenty up to 40.
- Recognize the number of twos in four, six, and eight, and the number of threes in six and nine in a model.
- Identify numeric and non-numeric AB patterns.

- Given a model, represent a whole number (1–3) as a fraction with a denominator of 2, 3, or 4.
- Identify parts of a set as one-half, one-fourth, or the whole of the set, limited to four objects.
- Compare unit fractions one-half, one-third, and one-fourth using a model.
- Add and subtract through 20, without regrouping.
- Show multiplication as repeat addition with a product no greater than 20 using a model.
- Multiply one and two by ten, twenty, and thirty up to 60.
- Count the number of twos in four, six, and eight and the number of threes in six and nine using a model.
- Identify the next term in numeric and non-numeric AB patterns.

- Translate between a model and a representation of a whole number (1–3) as a fraction with a denominator of 2, 3, or 4.
- Represent parts of a set as one-half, one-fourth, or the whole of the set, limited to four objects.
- Compare unit fractions one-half, one-third, and one-fourth in real-world problems using a model.
- Add and subtract through 20, without regrouping, to solve real-world problems.
- Represent multiplication as repeat addition, with a product no greater than 20.
- Multiply one and two by ten, twenty, and thirty up to 60 in real-world problems.
- Represent the number of twos in four, six, and eight and the number of threes in six and nine.
- Describe the pattern in a numeric or non-numeric AB pattern.

Level 3	Level 2	Level 1
<ul style="list-style-type: none"> <li>Recognize a multiplication equation as representing equal groups up to 20.</li> <li>Identify the solution to a one-step equation for sums and differences, 0–9.</li> <li>Identify the solution to a one-step real-world problem using addition or subtraction, 0–9.</li> <li>Recognize a one-step equation that represents a real-world problem with a variable limited to addition with sums, 0–9.</li> <li>Recognize the number of sides or angles in a regular polygon.</li> <li>Recognize two-dimensional shapes, limited to circles, triangles, or squares.</li> <li>Identify a line that separates a symmetrical two-dimensional shape into halves, limited to circle and square.</li> <li>Recognize that the perimeter of a rectangle is defined as the sum of its side lengths.</li> </ul>	<ul style="list-style-type: none"> <li>Identify a multiplication equation as representing equal groups up to 20.</li> <li>Solve a one-step equation for sums and differences, 0–9.</li> <li>Solve a one-step real-world problem using addition or subtraction, 0–9.</li> <li>Identify a one-step equation that represents a real-world problem with a variable limited to addition or subtraction with sums and differences, 0–9.</li> <li>Identify the number of sides or angles in a regular polygon.</li> <li>Identify two-dimensional shapes, circles, triangles, rectangles, and squares.</li> <li>Identify a line that separates a symmetrical two-dimensional shape into halves.</li> <li>Find the perimeter of a rectangle given the side lengths and a figure.</li> </ul>	<ul style="list-style-type: none"> <li>Identify a multiplication equation representing equal groups up to 20 in real-world problems.</li> <li>Represent a one-step equation for sums and differences, 0–9.</li> <li>Represent a one-step real-world problem using addition or subtraction, 0–9.</li> <li>Solve a one-step equation that represents a real-world problem with a variable limited to addition or subtraction with sums and differences, 0–9.</li> <li>Represent a polygon with a given number of sides or angles.</li> <li>Sort two-dimensional shapes from a collection of circles, triangles, rectangles, and squares.</li> <li>Identify a line that separates a symmetrical two-dimensional shape into halves in a representation of real-world objects.</li> <li>Identify a rectangle with a given perimeter.</li> </ul>

Level 3	Level 2	Level 1
<ul style="list-style-type: none"> <li>Recognize time to the hour.</li> <li>Identify the expression given in whole numbers of hours that can be used to find elapsed time.</li> <li>Recognize the length, given to the nearest inch, of a model of an object.</li> <li>Recognize that the area of a square is defined by counting its unit squares.</li> <li>Recognize congruent non-square rectangles.</li> <li>Identify a bar graph or a pictograph.</li> <li>Recognize the key of a pictograph.</li> <li>Recognize a solution to a bar graph or a pictograph problem.</li> </ul>	<ul style="list-style-type: none"> <li>Tell time to the hour.</li> <li>Add whole numbers of hours to find elapsed time.</li> <li>Measure length to the nearest inch using a model of an object.</li> <li>Find the area of a square by counting whole-number unit squares.</li> <li>Identify congruent non-square rectangles.</li> <li>Identify a characteristic of a bar graph or a pictograph (e.g., quantities, comparisons).</li> <li>Identify the scale of a bar graph and/or the key of a pictograph.</li> <li>Solve a problem using a bar graph or a pictograph.</li> </ul>	<ul style="list-style-type: none"> <li>Represent time to the hour in real-world problems.</li> <li>Demonstrate an understanding of elapsed time using whole numbers.</li> <li>Identify an object with a given length to the nearest inch.</li> <li>Identify a square with a given area.</li> <li>Identify a congruent rectangle when given a non-square rectangle.</li> <li>Interpret information in a bar graph or pictograph.</li> <li>Interpret information using the scale in a bar graph and/or the key of a pictograph.</li> <li>Solve a multi-step problem using a bar graph or a pictograph.</li> </ul>

## Grade 4 Achievement Level Descriptors

### Nebraska Math Alternate Assessment

Level 3	Level 2	Level 1
<p>Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>• Recognize numbers 0–100.</li> <li>• Recognize odd or even numbers up to 20.</li> <li>• Count by fives or tens with numbers, models, or objects up to 40.</li> <li>• Recognize the factors of 4, 6, 10, 15, and 20.</li> <li>• Use the phrases “less than,” “greater than,” or “equal to” to compare whole numbers up to 40.</li> </ul>	<p>Established learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>• Identify representations of numbers 0–100.</li> <li>• Identify odd and even numbers up to 20.</li> <li>• Count by twos, fives, and tens with numbers, models, or objects up to 40.</li> <li>• Identify the factors of 4, 6, 10, 15, and 20.</li> <li>• Use symbols <math>&lt;</math>, <math>&gt;</math>, and <math>=</math> to compare whole numbers up to 40.</li> </ul>	<p>Distinguished learners demonstrate advanced proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>• Represent numbers 0–100.</li> <li>• Represent odd and even numbers up to 20.</li> <li>• Count by twos, fives, and tens with numbers up to 40.</li> <li>• Represent the factors of 4, 6, 10, 15, and 20.</li> <li>• Demonstrate an understanding of using symbols <math>&lt;</math>, <math>&gt;</math>, and <math>=</math> to compare whole numbers up to 40.</li> </ul>

### Level 3

- Recognize the nearest ten of a given number, 1–100, using a number line.
- Recognize a decimal on a number line from 0 to 1 (tenths only).
- Compare or order mixed numbers with fourths or halves less than 3 using a number line or visual model.
- Multiply 5's or 10's by a single-digit number.
- Multiply two-digit multiples of 10 by 2.
- Recognize numbers 2–20 in equal-size groups.
- Add or subtract halves to halves or fourths to fourths to a whole.
- Identify the solution to a simple one-step single-digit equation using addition or subtraction.

### Level 2

- Round a two-digit number, 1–100, to the nearest ten using a number line.
- Identify decimals on a number line from 0 to 1 (tenths only).
- Compare and order mixed numbers with fourths and halves less than 3.
- Multiply 2's, 5's and 10's by a single-digit number.
- Multiply two-digit multiples of 10 by 2 or 5.
- Identify numbers 2–20 in equal-size groups.
- Add and subtract halves to halves, thirds to thirds, fourths to fourths, and fifths to fifths to a whole.
- Solve simple one-step single-digit equations using addition or subtraction.

### Level 1

- Round a two-digit number, 1–100, to the nearest ten.
- Demonstrate an understanding of decimals on a number line from 0 to 1 (tenths only).
- Demonstrate an understanding of comparing and ordering mixed numbers with fourths and halves less than 3.
- Multiply 2's, 5's, and 10's by a single-digit number in real-world problems.
- Multiply two-digit multiples of 10 by 2 or 5 in real-world problems.
- Represent numbers 2–20 in equal-size groups.
- Add and subtract halves to halves, thirds to thirds, fourths to fourths, and fifths to fifths...to a whole.
- Demonstrate an understanding of solving one-step single-digit equations using addition or subtraction.

Level 3	Level 2	Level 1
<ul style="list-style-type: none"> <li>Identify the equation or expression that can be used to solve a simple real-world addition or subtraction problem up to 40, without regrouping.</li> <li>Identify the solution to a real-world addition problem with halves or fourths.</li> <li>Identify the first step when solving numerical expressions using order of operations, with numbers 1 through 5.</li> <li>Identify an angle that is the same as a given angle.</li> <li>Recognize parallel and intersecting lines.</li> <li>Recognize acute, right, and obtuse triangles.</li> <li>Recognize a right angle.</li> <li>Recognize <math>45^\circ</math>, <math>90^\circ</math>, and <math>180^\circ</math> angles without measuring.</li> <li>Recognize a line of symmetry in a rectangle, square, or circle.</li> </ul>	<ul style="list-style-type: none"> <li>Solve real-world problems with addition and subtraction up to 40, without regrouping.</li> <li>Solve addition real-world problems with halves and fourths.</li> <li>Solve numerical expressions using order of operations, with numbers 1 through 5.</li> <li>Compare larger and smaller angles.</li> <li>Identify parallel and intersecting lines.</li> <li>Identify acute, right, and obtuse triangles.</li> <li>Identify right angles.</li> <li>Identify <math>45^\circ</math>, <math>90^\circ</math>, and <math>180^\circ</math> angles without measuring.</li> <li>Identify a line of symmetry in a rectangle, square, or circle.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate an understanding of solving real-world addition and subtraction problems up to 40, without regrouping.</li> <li>Demonstrate an understanding of solving real-world addition problems with halves and fourths.</li> <li>Solve numerical expressions using order of operations, with numbers 1 through 5, in real-world problems.</li> <li>Compare angles in real-world objects.</li> <li>Identify parallel and intersecting lines in real-world problems.</li> <li>Sort acute, right, and obtuse triangles.</li> <li>Demonstrate an understanding of right angles using real-world objects.</li> <li>Identify <math>45^\circ</math>, <math>90^\circ</math>, and <math>180^\circ</math> angles in real-world objects without measuring.</li> <li>Identify a line of symmetry in a rectangle, square, or circle in real-world objects.</li> </ul>

Level 3	Level 2	Level 1
<ul style="list-style-type: none"> <li>Recognize that the area of a rectangle is defined by counting its unit squares.</li> <li>Identify the number of inches in one foot using a model of a ruler.</li> <li>Recognize the frequency of a data point in a line plot.</li> <li>Identify an expression or equation that can be used to solve an addition problem with whole numbers using information from a line plot.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the area of a rectangle by counting unit squares.</li> <li>Identify the number of inches in one or two feet using a model of a ruler.</li> <li>Interpret information in a line plot using two data points.</li> <li>Solve a problem with addition or subtraction of whole numbers using information from a line plot.</li> </ul>	<ul style="list-style-type: none"> <li>Identify a rectangle with a given area.</li> <li>Identify the numbers of inches in one and two feet using a model of a ruler.</li> <li>Compare information in a line plot using two data points.</li> <li>Demonstrate an understanding of solving a problem with addition and subtraction of whole numbers using information from a line plot.</li> </ul>

## Grade 5 Achievement Level Descriptors

### Nebraska Math Alternate Assessment

Level 3	Level 2	Level 1
<p>Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>Recognize whole numbers up to 200.</li> <li>Compare whole numbers up to 200 using the phrases “less than,” “greater than,” or “equal to.”</li> <li>Round whole numbers up to 100 to the nearest tens place, using a number line.</li> <li>Identify equivalent fractions between fourths, halves, and one whole using models.</li> </ul>	<p>Established learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>Identify representations of whole numbers up to 200.</li> <li>Compare and order whole numbers up to 200 using symbols <math>&lt;</math>, <math>&gt;</math>, and <math>=</math>.</li> <li>Round whole numbers up to 200 to the nearest tens place.</li> <li>Identify equivalent fractions between thirds, fourths, halves, and one whole using models.</li> </ul>	<p>Distinguished learners demonstrate advanced proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>Represent whole numbers up to 200.</li> <li>Demonstrate an understanding of comparing and ordering whole numbers up to 200 using symbols <math>&lt;</math>, <math>&gt;</math>, and <math>=</math>.</li> <li>Round whole numbers up to 200 to the nearest tens place in the context of estimation.</li> <li>Identify equivalent fractions between thirds, fourths, halves, and one whole.</li> </ul>

Level 3	Level 2	Level 1
<ul style="list-style-type: none"> <li>• Multiply a two-digit number by zero or one.</li> <li>• Divide a two-digit whole number (up to 20) by a single-digit number, with no remainder.</li> <li>• Multiply <math>1/2</math> or <math>1/4</math> by 2 and 4 using visual models.</li> <li>• Recognize a visual model showing division of a whole number, 1-10, by <math>1/2</math> or <math>1/4</math>.</li> <li>• Add or subtract fractions with like denominators (limited to 2, 4, or 8) using a visual model, without regrouping.</li> <li>• Multiply a one-digit whole number by 10.</li> <li>• Identify the location of a whole-number point on a number line.</li> <li>• Solve a numerical expression with addition and subtraction using whole numbers 1-9.</li> </ul>	<ul style="list-style-type: none"> <li>• Multiply a two-digit number by a single-digit number.</li> <li>• Divide a two-digit whole number by a single-digit number, with no remainder.</li> <li>• Multiply <math>1/3</math>, <math>1/2</math>, or <math>1/4</math> by 2, 3, and 4.</li> <li>• Divide a whole number by <math>1/3</math>, <math>1/2</math>, or <math>1/4</math> using a visual model (e.g., 3 divided by one-half).</li> <li>• Add and subtract fractions with like denominators using a visual model, without regrouping.</li> <li>• Multiply a one-digit whole number by 100.</li> <li>• Identify the location of ordered pairs on a coordinate plane (1st quadrant).</li> <li>• Solve a numerical expression with addition or subtraction and multiplication, 1–5.</li> </ul>	<ul style="list-style-type: none"> <li>• Multiply a two-digit number by a single-digit number in real-world problems.</li> <li>• Divide a two-digit whole number by a single-digit number, with no remainder, in real-world problems.</li> <li>• Multiply <math>1/3</math>, <math>1/2</math>, or <math>1/4</math> by 2, 3, and 4 in real-world problems.</li> <li>• Divide a whole number by <math>1/3</math>, <math>1/2</math>, or <math>1/4</math>.</li> <li>• Add and subtract fractions with like denominators.</li> <li>• Demonstrate an understanding of multiplying a one-digit whole number by 100.</li> <li>• Graph an ordered pair on a coordinate plane (1st quadrant) when given an ordered pair.</li> <li>• Solve a numerical expression with addition or subtraction and multiplication using whole numbers 1-5 in real-world problems.</li> </ul>

**Level 3****Level 2****Level 1**

- Identify the solution to a simple real-world problem with addition of fractions, without regrouping, involving halves, thirds, and fourths.
- Recognize three-dimensional models, limited to cube, cylinder, and cone.
- Recognize a face, edge, or vertex of a cube.
- Identify a shape when given the number of sides or angles, limited to triangles and squares.
- Recognize the x- or y-coordinate of whole-number points in quadrant I.
- Recognize that the volume of a rectangular prism is determined by counting its unit cubes.
- Recognize 12 inches is equal to 1 foot using a model.
- Recognize the value of a bar in a bar graph.

- Solve real-world problems with addition or subtraction of fractions limited to like denominators, without regrouping, involving halves, thirds, and fourths.
- Identify three-dimensional models, limited to cube, cylinder, and cone.
- Identify the faces, edges, and vertices of a cube.
- Sort triangles, rectangles, and squares by number of sides and/or angles.
- Identify the x- or y-coordinate of whole-number points in quadrant I.
- Find the volume of a rectangular prism by counting unit cubes.
- Convert whole numbers of feet to inches using a model.
- Interpret information in a bar graph using at least two data points.

- Demonstrate an understanding of solving real-world problems with addition or subtraction of fractions limited to like denominators, without regrouping, involving halves, thirds, and fourths.
- Identify three-dimensional models, limited to cube, cylinder, and cone based on their properties.
- Count the numbers of faces, edges, and vertices of a cube.
- Compare the numbers of sides and/or angles in triangles, rectangles, and squares.
- Identify the x- and y-coordinates of whole-number points in quadrant I.
- Identify a rectangular prism with a given volume.
- Convert whole numbers of feet to inches.
- Compare information in a bar graph using at least two data points.

Level 3	Level 2	Level 1
<ul style="list-style-type: none"> <li>Identify an expression or equation that can be used to solve an addition problem with whole numbers using information from a bar graph.</li> </ul>	<ul style="list-style-type: none"> <li>Solve a problem with addition or subtraction of whole numbers using information from a bar graph.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate an understanding of solving a problem with addition and subtraction of whole numbers using information from a bar graph.</li> </ul>

## Grade 6 Achievement Level Descriptors

### Nebraska Math Alternate Assessment

Level 3	Level 2	Level 1
<p>Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>Recognize the common factors of 4 and 6, 6 and 9, and 8 and 10 when given the factors of both numbers.</li> <li>Identify representations of 10, 100, or 1,000 as multiples of 10.</li> <li>Compare or order halves and fourths of whole numbers 0–1 on a number line.</li> <li>Identify the decimal equivalent of halves, fourths, and tenths using a model.</li> </ul>	<p>Established learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>Identify the common factors of 4 and 6, 6 and 9, and 8 and 10 when given the factors of both numbers.</li> <li>Represent 10, 100, 1,000, or 10,000 as a power of 10.</li> <li>Compare and order halves, fourths, and tenths of whole numbers 0–1 on a number line.</li> <li>Convert halves, fourths, and tenths to decimals using a model.</li> </ul>	<p>Distinguished learners demonstrate advanced proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>Represent the common factors of 4 and 6, 6 and 9, and 8 and 10.</li> <li>Translate between 10, 100, 1,000, or 10,000 and their representations as powers of 10.</li> <li>Compare and order halves, fourths, and tenths of whole numbers 0–1 on a number line in real-world problems.</li> <li>Convert decimals to halves, fourths, and tenths using a model.</li> </ul>

Level 3	Level 2	Level 1
<ul style="list-style-type: none"> <li>Identify models of integers (-5 to 5) using a number line.</li> <li>Compare and order integers (-5 to 5) on a number line.</li> <li>Identify the absolute value of an integer, -5 to 5.</li> <li>Multiply and divide positive fractions, halves and fourths using a model.</li> <li>Divide a two-digit number by a one-digit number, limited to single digit quotients, with a remainder.</li> <li>Add and subtract numbers 0–10 with one decimal place, without regrouping, using a visual model.</li> <li>Identify the closest whole number to a decimal number with tenths.</li> <li>Identify the output when given the input and the rule for an input/output box.</li> <li>Recognize simple models of whole-number expressions using the distributive property, limited to numbers 1-3.</li> </ul>	<ul style="list-style-type: none"> <li>Identify models of integers (-10 to 10) using a number line.</li> <li>Compare and order integers (-10 to 10) on a number line.</li> <li>Identify the absolute value of an integer, -10 to 10.</li> <li>Multiply and divide positive fractions, halves, fourths, thirds, and tenths using a model.</li> <li>Divide a two-digit number by a one-digit number, with a remainder.</li> <li>Add and subtract numbers 0–10 with one decimal place, without regrouping.</li> <li>Estimate the sum of two decimal numbers with tenths (e.g., 5.2 + 3.7 is about 9).</li> <li>Match a simple word phrase with an input/output box.</li> <li>Identify whole-number expressions using the distributive property (e.g., <math>2(3 + 4)</math>).</li> </ul>	<ul style="list-style-type: none"> <li>Represent integers (-10 to 10) using a number line.</li> <li>Compare and order integers (-10 to 10) on a number line when given multiple groups of integers.</li> <li>Determine the absolute value of an integer, -10 to 10.</li> <li>Represent a model of multiplication and division of positive fractions, halves, fourths, thirds, and tenths.</li> <li>Divide a two-digit number by a one-digit number, with a remainder, in real-world problems.</li> <li>Add and subtract numbers 0–10 with one decimal place, without regrouping, in real-world problems.</li> <li>Estimate the sum of two decimal numbers with tenths in real-world problems.</li> <li>Represent an input/output box with a simple word phrase.</li> <li>Represent equivalent whole-number expressions using the distributive property (e.g., <math>2 \times 3 + 2 \times 4 = 2(3 + 4)</math>).</li> </ul>

### Level 3

- Recognize the final answer when using order of operations involving addition, subtraction, and multiplication.
- Identify the solution to a one-step equation using addition or subtraction.
- Identify the last number in a table of consecutive values with a ratio of 1:2 or 1:3.
- Identify an integer greater than or less than a given integer (-5 to 5) on a number line.
- Identify the solution to a real-world problem with addition of decimal numbers to the hundredths, without regrouping.
- Identify the solution to a real-world problem using a ratio up to 1:3.
- Recognize a two-dimensional representation (net) of a cube, cylinder, or cone.

### Level 2

- Demonstrate an understanding of order of operations involving addition, subtraction, and multiplication.
- Solve a one-step equation using addition and subtraction.
- Identify the missing number in a table with a ratio of 1:2, 1:3, or 1:10.
- Identify a solution to an inequality on a number line (-10 to 10).
- Solve real-world problems with addition and subtraction of decimal numbers to the hundredths, without regrouping.
- Solve real-world problems using a ratio up to 1:3.
- Identify a cube, cylinder, or cone from a given two-dimensional representation (net).

### Level 1

- Solve expressions involving addition, subtraction, and multiplication using order of operations.
- Solve a one-step equation using addition and subtraction in real-world problems.
- Identify a table of values with a ratio of 1:2, 1:3, or 1:10 in real-world problems.
- Represent all solutions to an inequality on a number line (-10 to 10).
- Demonstrate an understanding of setting up and solving real-world problems with addition and subtraction of decimal numbers to the hundredths, without regrouping.
- Demonstrate an understanding of setting up and solving real-world problems using a ratio up to 1:3.
- Identify a cube, cylinder, or cone from a two-dimensional representation (net) using real-world objects.

**Level 3****Level 2****Level 1**

- Recognize a point graphed in quadrant I.
- Recognize the location of a vertex of a triangle in quadrant I with other vertices on the origin and the x- or y-axis.
- Recognize the area of a rectangle using its whole-number side lengths.
- Recognize the surface area of a rectangular prism by counting unit squares in a net.
- Recognize the volume of a rectangular prism.
- Recognize a histogram.
- Identify a feature of a histogram, such as a label.
- Recognize the mode of a set of ordered whole-number data.

- Identify a point on a 4-by-4 grid in quadrant I.
- Identify the location of one vertex of a triangle in quadrant I with one vertex on the origin.
- Find the area of a rectangle using its whole-number side lengths.
- Find the surface area of a rectangular prism by counting unit squares in a net.
- Find the volume of a rectangular prism using the volume formula.
- Interpret a histogram that matches a data set.
- Solve basic problems using histograms (e.g., How many times did Sara knock down 9 pins? How many more students have 1 pet than have 2 pets?).
- Find the mode of a set of ordered whole-number data.

- Determine the coordinates of a point graphed in a given 4-by-4 grid in quadrant I.
- Graph the given coordinates of one vertex of a triangle in quadrant I with one vertex on the origin.
- Identify the missing whole-number side length of a rectangle with a given area.
- Match a rectangular prism to its net when given the surface area of a prism.
- Identify the missing dimension of a rectangular prism when given the volume of the prism.
- Complete a histogram that matches a data set.
- Solve addition or subtraction problems using three intervals in a histogram.
- Determine a data set when given the mode.

Level 3	Level 2	Level 1
<ul style="list-style-type: none"> <li>Recognize the median of a set of ordered whole-number data.</li> </ul>	<ul style="list-style-type: none"> <li>Find the median of a set of ordered whole-number data.</li> </ul>	<ul style="list-style-type: none"> <li>Determine the ordered whole-number data set that corresponds to a given median.</li> </ul>

## Grade 7 Achievement Level Descriptors

### Nebraska Math Alternate Assessment

Level 3	Level 2	Level 1
<p>Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>• Identify the corresponding percentage when given the fraction <math>\frac{1}{4}</math> or <math>\frac{1}{2}</math>.</li> <li>• Add or subtract positive rational numbers with like denominators up to 5, without regrouping.</li> <li>• Add positive and negative integers (-5 to 5).</li> <li>• Identify correct estimations of addition or subtraction results to the nearest 10, up to 50.</li> </ul>	<p>Established learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>• Write the corresponding percentage when given the fraction <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, or <math>\frac{3}{4}</math>.</li> <li>• Add and subtract positive rational numbers with like denominators up to 10, without regrouping.</li> <li>• Add positive and negative integers (-10 to 10).</li> <li>• Estimate addition and subtraction results to the nearest 10, up to 100.</li> </ul>	<p>Distinguished learners demonstrate advanced proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>• Translate between representing <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, and <math>\frac{3}{4}</math> as percentages and fractions.</li> <li>• Add and subtract positive rational numbers with like denominators up to 10, without regrouping, in a real-world problem.</li> <li>• Add positive and negative integers (-10 to 10) in a real-world problem.</li> <li>• Estimate addition and subtraction results in context to the nearest 10, up to 100.</li> </ul>

**Level 3****Level 2****Level 1**

- Recognize a solution to a given inequality.
- Recognize a ratio as the relationship between two quantities using a model.
- Recognize that two identical expressions are equivalent.
- Identify the correct substitution of a positive integer value for a single variable in a simple addition or subtraction expression.
- Identify the solution to a one-step equation using multiplication.
- Recognize a solution to a simple inequality involving multiplication using a number line (0 to 10).
- Identify a one-step linear equation, limited to addition, containing a positive integer that represents a solution to a real-world problem.

- Identify a solution to a given inequality.
- Identify a ratio between two quantities using a model.
- Identify equivalent expressions with one variable (e.g.,  $2n + 3n$  is the same as  $5n$ ).
- Evaluate an addition or subtraction expression when given the positive integer value of the single variable.
- Solve a one-step equation using multiplication.
- Identify a solution to an inequality involving multiplication using a number line (-10 to 10).
- Identify a one-step linear equation containing a positive integer that represents a solution to a real-world problem.

- Represent the solution to a given inequality with words, number lines, or pictures.
- Complete or describe a ratio between two quantities using a model.
- Complete or describe an equivalent expression when given an expression with one variable.
- Evaluate an addition and subtraction expression when given the positive integer value of a single variable in a real-world problem.
- Solve a one-step equation using multiplication in a real-world problem.
- Represent the solution to an inequality involving multiplication using a number line (-10 to 10).
- Complete or describe a one-step linear equation containing a positive integer that represents a solution to a real-world problem.

Level 3	Level 2	Level 1
<ul style="list-style-type: none"> <li>Identify a solution to a one-step linear equation using a positive integer that represents a real-world problem.</li> <li>Identify an inequality, limited to addition, that represents a solution to a real-world problem, using a model.</li> <li>Identify the percentage for a discount problem (10% or 50%).</li> <li>Locate the scale of <math>\frac{1}{4}</math> or <math>\frac{1}{2}</math> on a scale drawing.</li> <li>Recognize two angles as being congruent when their angle measures are the same.</li> <li>Recognize the perimeter of two adjoining rectangles by counting unit lengths.</li> <li>Recognize the area of two adjoining rectangles by counting unit squares.</li> <li>Recognize the center or the radius of a circle.</li> </ul>	<ul style="list-style-type: none"> <li>Solve a one-step linear equation using a positive integer that represents a solution to a real-world problem.</li> <li>Identify an inequality that represents a solution to a real-world problem, using a model.</li> <li>Identify the percentage for a discount problem (10%, 25%, or 50%).</li> <li>Identify the measure of a scale drawing using a scale of <math>\frac{1}{4}</math>, <math>\frac{1}{3}</math>, or <math>\frac{1}{2}</math>.</li> <li>Identify a pair of congruent angles in two intersecting lines.</li> <li>Find the perimeter of two adjoining rectangles by counting unit lengths.</li> <li>Find the area of two adjoining rectangles by counting unit squares.</li> <li>Identify the center and radius of a circle.</li> </ul>	<ul style="list-style-type: none"> <li>Complete and solve a one-step linear equation using a positive integer that represents a solution to a real-world problem.</li> <li>Complete and solve an inequality that represents a solution to a real-world problem, using a model.</li> <li>Identify the percentage for a discount (10%, 25%, or 50%) in a real-world problem.</li> <li>Determine the measure of a scale drawing using a scale of <math>\frac{1}{4}</math>, <math>\frac{1}{3}</math>, or <math>\frac{1}{2}</math>.</li> <li>Describe a pair of congruent angles in two intersecting lines.</li> <li>Find a missing side length when given the perimeter and some side lengths of two adjoining rectangles.</li> <li>Identify two adjoining rectangles when given the total area of the two rectangles.</li> <li>Identify the center and radius of a circle in a real-world problem.</li> </ul>

Level 3	Level 2	Level 1
<ul style="list-style-type: none"> <li>• Identify thirds or fourths of a circle using a circle graph.</li> <li>• Recognize probability as the likelihood an event will occur, limited to always or never.</li> </ul>	<ul style="list-style-type: none"> <li>• Solve problems with thirds and fourths of a circle using a circle graph.</li> <li>• Identify the probability of an event as always, sometimes, or never.</li> </ul>	<ul style="list-style-type: none"> <li>• Interpret information in a circle graph using thirds and fourths of a circle.</li> <li>• Identify or describe an example of an event for which the probability is always, sometimes, or never.</li> </ul>

## Grade 8 Achievement Level Descriptors

### Nebraska Math Alternate Assessment

Level 3	Level 2	Level 1
<p>Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>• Identify whole numbers, fractions, or decimals.</li> <li>• Identify numbers with a base of 2, 3, or 4 and positive exponents of 2 or 3 in expanded form.</li> <li>• Compare or order fourths, halves, and whole numbers 1–5 with a number line.</li> <li>• Identify the squares of whole numbers up to 3.</li> </ul>	<p>Established learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>• Distinguish among whole numbers, fractions, and decimals.</li> <li>• Represent numbers with a base of 2, 3, 4, or 5 and positive exponents of 2 and 3 in expanded form (e.g., <math>4^3 = 4 \times 4 \times 4</math>).</li> <li>• Compare and order tenths, fourths, thirds, halves, and whole numbers 1–10 with a number line.</li> <li>• Identify the squares of whole numbers up to 5.</li> </ul>	<p>Distinguished learners demonstrate advanced proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>• Distinguish among and identify whole numbers, fractions, and decimals.</li> <li>• Translate between representations of numbers with a base of 2, 3, 4, or 5 and positive exponents of 2 or 3 and their expanded form.</li> <li>• Compare and order tenths, fourths, thirds, halves, and whole numbers 1–10 with a number line in a real-world problem.</li> <li>• Represent the squares of whole numbers up to 5 both numerically and pictorially.</li> </ul>

**Level 3****Level 2****Level 1**

- Identify absolute value using a model.
- Identify correct estimations of multiplication results to the nearest 10, up to 50.
- Identify an expression with one operation, limited to addition or subtraction, that matches a description.
- Identify the rate of change of a proportional relationship when given a table.
- Recognize a point of intersection (solution) for intersecting lines on a coordinate plane.
- Identify a point on a line going through the origin.
- Identify the solution to a simple equation with up to two steps, using whole numbers.

- Determine absolute value using a model (e.g., temperature below zero).
- Estimate multiplication results to the nearest 10, up to 100.
- Identify an expression with two different operations that matches a description.
- Describe the rate of change of a proportional relationship when given a table.
- Identify the point of intersection (solution) for intersecting lines on a coordinate plane.
- Given a graph of a line through the origin and a point on the line, determine another point on the line.
- Solve a two-step equation using whole numbers (e.g.,  $2n - 8 = 0$ ;  $n = 4$ ).

- Apply absolute value using a model.
- Estimate multiplication results in context to the nearest 10, up to 100.
- Complete an expression with two different operations to match a description.
- Determine the missing value in a table of values when given the rate of change of a proportional relationship.
- Identify two lines on a coordinate plane that intersect at a given point.
- Complete the graph of a line going through the origin when given two other points on the line.
- Solve a two-step equation using whole numbers in a real-world problem.

Level 3	Level 2	Level 1
<ul style="list-style-type: none"> <li>Identify the solution to a simple inequality with up to two steps using whole numbers.</li> <li>Identify an equation that represents a simple number pattern limited to counting by 2's, 5's, and 10's.</li> <li>Identify an equation that represents a simple real-world problem with fractions, limited to halves and fourths.</li> <li>Identify the answer to a simple real-world problem with fractions, limited to halves and fourths.</li> <li>Identify the missing angle measure in 45-45-90 triangles or 30-60-90 triangles when given two of the angles and a drawing of the triangle.</li> <li>Recognize a shape with its reflection.</li> <li>Recognize congruent two-dimensional pairs of shapes.</li> <li>Recognize similar two-dimensional shapes.</li> <li>Recognize the distance between two points on the <math>x</math>- or <math>y</math>-axis in quadrant I.</li> </ul>	<ul style="list-style-type: none"> <li>Solve a two-step inequality using whole numbers (e.g., <math>2n - 8 &gt; 0</math>; <math>n &gt; 4</math>).</li> <li>Identify an equation that represents a number pattern.</li> <li>Identify an equation that represents a real-world problem with fractions.</li> <li>Solve a real-world problem with fractions.</li> <li>Identify the missing angle measure in 45-45-90 triangles and 30-60-90 triangles when given two of the angles and a drawing of the triangle.</li> <li>Identify the orientation of a shape or letter following a reflection.</li> <li>Distinguish between pairs of congruent and non-congruent two-dimensional shapes.</li> <li>Distinguish between pairs of similar and non-similar two-dimensional shapes.</li> <li>Find the distance between two points on the <math>x</math>- or <math>y</math>-axis in quadrant I.</li> </ul>	<ul style="list-style-type: none"> <li>Solve a two-step inequality using whole numbers in a real-world problem.</li> <li>Identify an equation that represents a complex number pattern.</li> <li>Complete an equation that represents a real-world problem with fractions.</li> <li>Solve a complex real-world problem with fractions.</li> <li>Determine the missing angle measure in context in 45-45-90 or 30-60-90 triangles when given two of the angles and a drawing of the triangle.</li> <li>Complete a reflection of a shape or letter.</li> <li>Represent pairs of two-dimensional shapes that are congruent or non-congruent in a model.</li> <li>Represent a model of a similar shape when given a two-dimensional shape.</li> <li>Graph two points a specified distance apart on the <math>x</math>- or <math>y</math>-axis in quadrant I.</li> </ul>

Level 3	Level 2	Level 1
<ul style="list-style-type: none"> <li>Recognize the cylinder or the cone with the greatest volume when given three cylinders or three cones with either the same base or the same height.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the cone, cylinder, or sphere with the greatest volume when given three cones with either the same base or the same height, three cylinders with either the same base or the same height, or three spheres.</li> </ul>	<ul style="list-style-type: none"> <li>Compare volumes among representations of cones, cylinders, or spheres when given three cones with either the same base or the same height, three cylinders with either the same base or the same height, or three spheres.</li> </ul>
<ul style="list-style-type: none"> <li>Distinguish a scatter plot from non-graphical representations.</li> </ul>	<ul style="list-style-type: none"> <li>Identify a scatter plot from graphical representations.</li> </ul>	<ul style="list-style-type: none"> <li>Identify information on a scatter plot.</li> </ul>
<ul style="list-style-type: none"> <li>Recognize the line of best fit on a scatter plot.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the line of best fit for a scatter plot.</li> </ul>	<ul style="list-style-type: none"> <li>Interpret information by using a line of best fit from a scatter plot.</li> </ul>

## Grade 11 Achievement Level Descriptors

### Nebraska Math Alternate Assessment

Level 3	Level 2	Level 1
<p>Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>• Recognize fractions, decimals, and whole numbers by type.</li> <li>• Add or subtract two-digit numbers, with regrouping.</li> <li>• Recognize a repeated multiplication problem as an exponential expression with a whole-number base and a whole-number exponent.</li> <li>• Recognize an operation, limited to addition and subtraction, that leads to a solution when given a real-world problem.</li> </ul>	<p>Established learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>• Sort fractions, decimals, and whole numbers by type (e.g., <math>\frac{3}{5}</math>, 4, 1.7).</li> <li>• Add and subtract two-digit numbers, with regrouping.</li> <li>• Rewrite a repeated multiplication problem as an exponential expression with a whole-number base and a whole-number exponent (e.g., <math>3 \times 3 \times 3 \times 3 = 3^4</math>).</li> <li>• Identify an operation that leads to a solution when given a real-world problem.</li> </ul>	<p>Distinguished learners demonstrate advanced proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College- and Career-Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.</p> <p><b>Students at this level</b></p> <ul style="list-style-type: none"> <li>• Sort and identify fractions, decimals, and whole numbers by type.</li> <li>• Add and subtract two-digit numbers, with complex regrouping.</li> <li>• Translate between a repeated multiplication problem and its equivalent exponential expression, limited to a whole-number base and a whole-number exponent.</li> <li>• Determine an operation that leads to a solution when given a complex real-world problem.</li> </ul>

### Level 3

- Recognize a graph that represents a given linear function from a table.
- Recognize a linear function from a graph.
- Recognize the graph of a horizontal line when given the corresponding  $x$ -,  $y$ - table of values.
- Recognize the location where  $y = 0$  on the graph of a linear function.
- Recognize equal values of money.
- Recognize the result of adding two simple linear expressions.
- Identify the correct substitution of a value for a variable in a simple linear expression.

### Level 2

- Identify a graph that represents a given linear function from a table.
- Identify a linear function from a graph.
- Given an  $x$ -,  $y$ - table of values, determine if the graph of the values forms a horizontal line or a vertical line.
- Use the graph of a linear function to locate the ordered pair where  $y = 0$ .
- Convert equivalent rates using money.
- Add two linear expressions (e.g.,  $(2x + 1) + (3x + 2) = 5x + 3$ ).
- Evaluate a linear expression at a specified value of the variable. Include cases where combining like terms or using the distributive property is necessary (e.g., Evaluate  $3x + 8 - 2x$  when  $x = 5$ . Evaluate  $2(x - 1)$  when  $x = 8$ ).

### Level 1

- Complete or describe a graph that represents a given linear function from a table.
- Identify and describe a linear function from a graph.
- Complete an  $x$ -,  $y$ - table of values so that the graph of the values forms a horizontal line or a vertical line.
- Identify a specified point on a graph of a linear function when given an ordered pair where  $y = 0$ .
- Convert equivalent rates using money and at least three different combinations.
- Add two complex linear expressions.
- Evaluate a linear expression at a specified value of the variable when the value of the variable is greater than 9. Include cases where combining like terms or using the distributive property is necessary.

**Level 3****Level 2****Level 1**

<ul style="list-style-type: none"><li>• Recognize that the absolute value of a negative integer from -5 to 0.</li><li>• Recognize that the graphical solution to a system of linear equations can be a single ordered pair.</li><li>• Recognize that corresponding angles in congruent triangles have the same angle measures.</li><li>• Recognize the right angle in a right triangle.</li><li>• Recognize perpendicular, intersecting, or parallel lines.</li><li>• Recognize graphs of linear equations that have parallel lines.</li><li>• Recognize the hypotenuse of right triangles.</li><li>• Recognize isosceles, equilateral, or scalene triangles.</li><li>• Recognize a quadrilateral on a coordinate grid as a trapezoid or a rectangle.</li></ul>	<ul style="list-style-type: none"><li>• Identify the absolute value of a negative integer.</li><li>• Identify the ordered pair of the graphical solution to a system of two linear equations.</li><li>• Identify corresponding angles of congruent triangles.</li><li>• Distinguish between right triangles and non-right triangles.</li><li>• Distinguish between perpendicular, intersecting, and parallel lines.</li><li>• Identify graphs of linear equations that have parallel lines or same slopes.</li><li>• Identify the hypotenuse of right triangles.</li><li>• Identify isosceles, equilateral, or scalene triangles.</li><li>• Identify a quadrilateral on a coordinate grid as a trapezoid, a rectangle, or a kite.</li></ul>	<ul style="list-style-type: none"><li>• Identify the absolute value of a negative integer in a real-world problem.</li><li>• Represent the graphical solution to a system of two linear equations.</li><li>• Determine a missing angle measure for a pair of corresponding angles in congruent triangles.</li><li>• Create a right triangle or a non-right triangle from an incomplete triangle.</li><li>• Create a pair of perpendicular, intersecting, and parallel lines from a given line.</li><li>• Graph a line parallel to a graph of a linear equation.</li><li>• Identify the hypotenuse of right triangles in real-world problems.</li><li>• Sort isosceles, equilateral, or scalene triangles.</li><li>• Create a quadrilateral on a coordinate grid in the shape of a trapezoid, a rectangle, or a kite from an incomplete quadrilateral.</li></ul>
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Level 3	Level 2	Level 1
<ul style="list-style-type: none"> <li>Recognize the arc length of a circle as one-fourth or one-half of the circle.</li> <li>Recognize the surface area of one face of a rectangular prism.</li> <li>Recognize the mean or median of an odd-numbered set of ordered data.</li> <li>Recognize the possible outcomes of flipping a fair coin once.</li> <li>Recognize a pair of mutually exclusive outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>Find the arc length of a circle as one-fourth, one-half, or three-fourths of the circle.</li> <li>Find the surface area of one face of a rectangular prism.</li> <li>Find the mean and median of an odd-numbered set of ordered data.</li> <li>Determine the possible outcomes of flipping a fair coin twice.</li> <li>Identify a pair of mutually exclusive outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>Represent a given arc length on a circle, limited to one-fourth, one-half, or three-fourths of a circle.</li> <li>Determine which faces of a rectangular prism have a given surface area.</li> <li>Determine the odd-numbered, ordered data set that corresponds with a given mean and median.</li> <li>Analyze the possible outcomes of flipping a fair coin twice.</li> <li>Determine an outcome that completes a pair of mutually exclusive outcomes when given one of the outcomes.</li> </ul>

# G

## Standard Setting Evaluation

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### Grades 3–8 and 11 NSCAS-AAM Standard Setting Evaluation

The purpose of this evaluation is to help document the process used to recommend achievement standards for the NSCAS-AAM. Your opinions and comments are important, as they will provide a basis for judging the quality of this process.

Please do not put your name on this form. While we need the information to examine the success of the various steps in the process, we want your comments to remain anonymous. This information will be reported only in the aggregate. When you have completed the evaluation, please give it to a facilitator. Thank you!

<b>Part 1: ABOUT THE STANDARD SETTING</b>		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Please consider the statements below and mark the level of agreement or disagreement you have with each statement. Please bubble only one of the five options for each statement.						
<b>Training &amp; ALDs</b>	1. The training provided a clear description of the workshop goals.	<input type="radio"/>				
	2. The training session leader clearly explained the Angoff procedure.	<input type="radio"/>				
	3. The training session leader clearly explained the materials used in the Angoff process.	<input type="radio"/>				
	4. The training addressed many of my questions and concerns.	<input type="radio"/>				
	5. The practice exercises were useful.	<input type="radio"/>				
	6. The opening session provided a clear overview of the standard setting process.	<input type="radio"/>				
	7. My role in the standard setting was well described.	<input type="radio"/>				
	8. After the training, I felt confident I was prepared to complete the standard setting task.	<input type="radio"/>				
	9. The achievement level descriptors (ALDs) were clear.	<input type="radio"/>				
	10. Adequate information was provided regarding the ALDs.	<input type="radio"/>				
	11. Enough time was provided to read and understand the ALDs.	<input type="radio"/>				
	12. The ALDs communicate a reasonable profile of students' achievement at each level.	<input type="radio"/>				
Please indicate your opinion regarding the usefulness of the following materials used. Please bubble only one of the four options for each material.			Not Useful	Somewhat Useful	Useful	Very Useful
<b>Materials</b>	13. Achievement level descriptors (ALDs)	<input type="radio"/>				
	14. Ordered item booklets (OIBs)	<input type="radio"/>				
	15. Operational test books	<input type="radio"/>				
	16. Item information sheets	<input type="radio"/>				
	17. Item separation charts	<input type="radio"/>				
	18. Impact data	<input type="radio"/>				
Please indicate the extent of your satisfaction with the following roles. Please bubble only one of the four options for each role.			Not Satisfied	Partially Satisfied	Satisfied	Very Satisfied
<b>Roles</b>	19. DRC trainer	<input type="radio"/>				
	20. DRC facilitator(s)	<input type="radio"/>				
	21. DRC content specialist	<input type="radio"/>				
	22. Other DRC staff	<input type="radio"/>				
Please indicate your opinion regarding the amount of time allotted for each activity. Please bubble only one of the three options for each activity.			Too Little Time	About Right	Too Much Time	
<b>Time Allotted</b>	23. Training	<input type="radio"/>				
	24. ALD discussion	<input type="radio"/>				
	25. Round 1 individual yes/no judgments	<input type="radio"/>				
	26. Discussion after Round 1	<input type="radio"/>				
	27. Round 2 individual yes/no judgments	<input type="radio"/>				
	28. Discussion after Round 2	<input type="radio"/>				
	29. Round 3 individual yes/no judgments	<input type="radio"/>				
30. Discussion of final recommendations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Please consider the statements below and mark the level of agreement or disagreement you have with each statement. Please bubble only one of the five options for each statement.		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>Judgments</b>	31. I understood how to make my individual yes/no judgments.	<input type="radio"/>				
	32. I had adequate time to make my individual yes/no judgments.	<input type="radio"/>				
	33. I considered the borderline students when making my individual yes/no judgments.	<input type="radio"/>				
	34. There was adequate time provided for discussion.	<input type="radio"/>				
	35. Discussing the borderline students helped me make my individual yes/no judgments.	<input type="radio"/>				
	36. I considered the standards when I made my individual yes/no judgments.	<input type="radio"/>				
	37. Overall, I believe my opinions were considered and valued by my group.	<input type="radio"/>				
<b>Overall</b>	38. My group's work was reflected in the presentation of recommendations across grades.	<input type="radio"/>				
	39. The group leader in my breakout room provided clear instructions.	<input type="radio"/>				
	40. Overall, I valued the workshop as a professional development experience.	<input type="radio"/>				
<b>Rooms</b>	41. The food and service at the facility met my expectations.	<input type="radio"/>				
	42. The breakout rooms had appropriate accommodations to facilitate our work.	<input type="radio"/>				

Grade	Please indicate the level of confidence you had in <u>recommending the cut scores</u> for each achievement level. Please bubble <u>only one</u> of the four options for each cut score. <b>Important: Only complete this section for the grade(s) you worked on.</b>	Not Confident	Partially Confident	Confident	Very Confident
3	43. Level 3/Level 2 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	44. Level 2/Level 1 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	45. Level 3/Level 2 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	46. Level 2/Level 1 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	47. Level 3/Level 2 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	48. Level 2/Level 1 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	49. Level 3/Level 2 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	50. Level 2/Level 1 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	51. Level 3/Level 2 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	52. Level 2/Level 1 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	53. Level 3/Level 2 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	54. Level 2/Level 1 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	55. Level 3/Level 2 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	56. Level 2/Level 1 cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Part 2: ABOUT YOU**

57. In which group did you work?
- Mathematics Alt. Grades 3–6
  - Mathematics Alt. Grades 6–8 & 11

*Part 3 below*

**Part 3: YOUR TURN**

*In this box, please feel free to add comments about any of your responses, make suggestions to improve future workshops, or tell us what you liked and did not like about this workshop. Thank you!*

**1. The training provided a clear description of the workshop goals.**

Response	Frequency	Percent	Mean: 4.73
Strongly Disagree	1	4.55	
Disagree	0	0.00	
Neutral	0	0.00	
Agree	2	9.09	
Strongly Agree	19	86.36	

**3. The training session leader clearly explained the materials used in the Angoff process.**

Response	Frequency	Percent	Mean: 4.77
Strongly Disagree	1	4.55	
Disagree	0	0.00	
Neutral	0	0.00	
Agree	1	4.55	
Strongly Agree	20	90.91	

**5. The practice exercises were useful.**

Response	Frequency	Percent	Mean: 4.45
Strongly Disagree	1	4.55	
Disagree	0	0.00	
Neutral	1	4.55	
Agree	6	27.27	
Strongly Agree	14	63.64	

**7. My role in the standard setting was well described.**

Response	Frequency	Percent	Mean: 4.62
Strongly Disagree	1	4.55	
Disagree	0	0.00	
Neutral	0	0.00	
Agree	4	18.18	
Strongly Agree	16	72.73	
No Response	1	4.55	

**2. The training session leader clearly explained the Angoff procedure.**

Response	Frequency	Percent	Mean: 4.77
Strongly Disagree	1	4.55	
Disagree	0	0.00	
Neutral	0	0.00	
Agree	1	4.55	
Strongly Agree	20	90.91	

**4. The training addressed many of my questions and concerns.**

Response	Frequency	Percent	Mean: 4.59
Strongly Disagree	1	4.55	
Disagree	0	0.00	
Neutral	0	0.00	
Agree	5	22.73	
Strongly Agree	16	72.73	

**6. The opening session provided a clear overview of the standard setting process.**

Response	Frequency	Percent	Mean: 4.68
Strongly Disagree	1	4.55	
Disagree	0	0.00	
Neutral	0	0.00	
Agree	3	13.64	
Strongly Agree	18	81.82	

**8. After the training, I felt confident I was prepared to complete the standard setting task.**

Response	Frequency	Percent	Mean: 4.64
Strongly Disagree	1	4.55	
Disagree	0	0.00	
Neutral	0	0.00	
Agree	4	18.18	
Strongly Agree	17	77.27	

**9. The achievement level descriptors (ALDs) were clear.**

Response	Frequency	Percent	Mean: 4.45
Strongly Disagree	1	4.55	
Disagree	0	0.00	
Neutral	1	4.55	
Agree	6	27.27	
Strongly Agree	14	63.64	

**11. Enough time was provided to read and understand the ALDs.**

Response	Frequency	Percent	Mean: 4.64
Strongly Disagree	1	4.55	
Disagree	0	0.00	
Neutral	0	0.00	
Agree	4	18.18	
Strongly Agree	17	77.27	

**13. Achievement level descriptors (ALDs)**

Response	Frequency	Percent	Mean: 3.77
Not Useful	0	0.00	
Somewhat Useful	0	0.00	
Useful	5	22.73	
Very Useful	17	77.27	

**15. Operational test books**

Response	Frequency	Percent	Mean: 3.64
Not Useful	0	0.00	
Somewhat Useful	1	4.55	
Useful	6	27.27	
Very Useful	15	68.18	

**17. Item separation charts**

Response	Frequency	Percent	Mean: 2.86
Not Useful	2	9.09	
Somewhat Useful	7	31.82	
Useful	5	22.73	
Very Useful	8	36.36	

**10. Adequate information was provided regarding the ALDs.**

Response	Frequency	Percent	Mean: 4.32
Strongly Disagree	1	4.55	
Disagree	0	0.00	
Neutral	0	0.00	
Agree	11	50.00	
Strongly Agree	10	45.45	

**12. The ALDs communicate a reasonable profile of students' achievement at each level.**

Response	Frequency	Percent	Mean: 4.45
Strongly Disagree	1	4.55	
Disagree	0	0.00	
Neutral	1	4.55	
Agree	6	27.27	
Strongly Agree	14	63.64	

**14. Ordered Item Booklets (OIBs)**

Response	Frequency	Percent	Mean: 3.82
Not Useful	0	0.00	
Somewhat Useful	1	4.55	
Useful	2	9.09	
Very Useful	19	86.36	

**16 Item information sheets**

Response	Frequency	Percent	Mean: 3.64
Not Useful	0	0.00	
Somewhat Useful	2	9.09	
Useful	4	18.18	
Very Useful	16	72.73	

**18. Impact data**

Response	Frequency	Percent	Mean: 4.00
Not Useful	0	0.00	
Somewhat Useful	0	0.00	
Useful	0	0.00	
Very Useful	22	100.00	

**19. DRC trainer**

Response	Frequency	Percent	Mean: 3.95
Not Satisfied	0	0.00	
Partially Satisfied	0	0.00	
Satisfied	1	4.55	
Very Satisfied	21	95.45	

**21. DRC content specialist**

Response	Frequency	Percent	Mean: 3.82
Not Satisfied	0	0.00	
Partially Satisfied	0	0.00	
Satisfied	4	18.18	
Very Satisfied	18	81.82	

**23. Training**

Response	Frequency	Percent	Mean: 2.09
Too Little Time	0	0.00	
About Right	20	90.91	
Too Much Time	2	9.09	

**25. Round 1 individual yes/no decisions**

Response	Frequency	Percent	Mean: 2.05
Too Little Time	0	0.00	
About Right	21	95.45	
Too Much Time	1	4.55	

**27. Round 2 individual yes/no decisions**

Response	Frequency	Percent	Mean: 2.05
Too Little Time	0	0.00	
About Right	21	95.45	
Too Much Time	1	4.55	

**29. Round 3 individual yes/no decisions**

Response	Frequency	Percent	Mean: 2.05
Too Little Time	0	0.00	
About Right	21	95.45	
Too Much Time	1	4.55	

**31. I understood how to make my individual yes/no decisions.**

Response	Frequency	Percent	Mean: 4.82
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Neutral	0	0.00	
Agree	4	18.18	
Strongly Agree	18	81.82	

**20. DRC facilitator(s)**

Response	Frequency	Percent	Mean: 3.91
Not Satisfied	0	0.00	
Partially Satisfied	0	0.00	
Satisfied	2	9.09	
Very Satisfied	20	90.91	

**22. Other DRC staff**

Response	Frequency	Percent	Mean: 3.59
Not Satisfied	0	0.00	
Partially Satisfied	1	4.55	
Satisfied	7	31.82	
Very Satisfied	14	63.64	

**24. ALD discussion**

Response	Frequency	Percent	Mean: 2.14
Too Little Time	0	0.00	
About Right	19	86.36	
Too Much Time	3	13.64	

**26. Discussion after Round 1**

Response	Frequency	Percent	Mean: 2.00
Too Little Time	0	0.00	
About Right	22	100.00	
Too Much Time	0	0.00	

**28. Discussion after Round 2**

Response	Frequency	Percent	Mean: 2.00
Too Little Time	0	0.00	
About Right	22	100.00	
Too Much Time	0	0.00	

**30. Discussion of final recommendations**

Response	Frequency	Percent	Mean: 2.00
Too Little Time	0	0.00	
About Right	22	100.00	
Too Much Time	0	0.00	

**32. I had adequate time to make my individual yes/no decisions.**

Response	Frequency	Percent	Mean: 4.82
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Neutral	0	0.00	
Agree	4	18.18	
Strongly Agree	18	81.82	

**33. I considered the borderline students when making my individual yes/no decisions.**

Response	Frequency	Percent	Mean: 4.82
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Neutral	0	0.00	<input type="text"/>
Agree	4	18.18	<input type="text"/>
Strongly Agree	18	81.82	<input type="text"/>

**35. Discussing the borderline students helped me make my individual yes/no decisions.**

Response	Frequency	Percent	Mean: 4.77
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Neutral	0	0.00	<input type="text"/>
Agree	5	22.73	<input type="text"/>
Strongly Agree	17	77.27	<input type="text"/>

**37. Overall, I believe my opinions were considered and valued by my group.**

Response	Frequency	Percent	Mean: 4.86
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Neutral	0	0.00	<input type="text"/>
Agree	3	13.64	<input type="text"/>
Strongly Agree	19	86.36	<input type="text"/>

**39. The group leader in my breakout room provided clear instructions.**

Response	Frequency	Percent	Mean: 4.95
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Neutral	0	0.00	<input type="text"/>
Agree	1	4.55	<input type="text"/>
Strongly Agree	21	95.45	<input type="text"/>

**41. The food and service at the facility met my expectations.**

Response	Frequency	Percent	Mean: 3.86
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	5	22.73	<input type="text"/>
Neutral	2	9.09	<input type="text"/>
Agree	6	27.27	<input type="text"/>
Strongly Agree	9	40.91	<input type="text"/>

**34. There was adequate time provided for discussion.**

Response	Frequency	Percent	Mean: 4.82
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Neutral	0	0.00	<input type="text"/>
Agree	4	18.18	<input type="text"/>
Strongly Agree	18	81.82	<input type="text"/>

**36. I considered the standards when I made my individual yes/no decisions.**

Response	Frequency	Percent	Mean: 4.86
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Neutral	0	0.00	<input type="text"/>
Agree	3	13.64	<input type="text"/>
Strongly Agree	19	86.36	<input type="text"/>

**38. My group's work was reflected in the presentation of recommendations across grades.**

Response	Frequency	Percent	Mean: 4.91
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Neutral	0	0.00	<input type="text"/>
Agree	2	9.09	<input type="text"/>
Strongly Agree	20	90.91	<input type="text"/>

**40. Overall, I valued the workshop as a professional development experience.**

Response	Frequency	Percent	Mean: 4.95
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Neutral	0	0.00	<input type="text"/>
Agree	1	4.55	<input type="text"/>
Strongly Agree	21	95.45	<input type="text"/>

**42. The breakout rooms had appropriate accommodations to facilitate our work.**

Response	Frequency	Percent	Mean: 4.45
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Neutral	3	13.64	<input type="text"/>
Agree	6	27.27	<input type="text"/>
Strongly Agree	13	59.09	<input type="text"/>

**43. Grade 3 Level 3/Level 2 cut score**

Response	Frequency	Percent	Mean: 3.90
Not Confident	0	0.00	
Partially Confident	0	0.00	
Confident	1	4.55	
Very Confident	9	40.91	
<b>No Response</b>	<b>12</b>	<b>54.55</b>	

**44. Grade 3 Level 2/Level 1 cut score**

Response	Frequency	Percent	Mean: 3.90
Not Confident	0	0.00	
Partially Confident	0	0.00	
Confident	1	4.55	
Very Confident	9	40.91	
<b>No Response</b>	<b>12</b>	<b>54.55</b>	

**45. Grade 4 Level 3/Level 2 cut score**

Response	Frequency	Percent	Mean: 3.90
Not Confident	0	0.00	
Partially Confident	0	0.00	
Confident	1	4.55	
Very Confident	9	40.91	
<b>No Response</b>	<b>12</b>	<b>54.55</b>	

**46. Grade 4 Level 2/Level 1 cut score**

Response	Frequency	Percent	Mean: 4.00
Not Confident	0	0.00	
Partially Confident	0	0.00	
Confident	0	0.00	
Very Confident	10	45.45	
<b>No Response</b>	<b>12</b>	<b>54.55</b>	

**47. Grade 5 Level 3/Level 2 cut score**

Response	Frequency	Percent	Mean: 3.90
Not Confident	0	0.00	
Partially Confident	0	0.00	
Confident	1	4.55	
Very Confident	9	40.91	
<b>No Response</b>	<b>12</b>	<b>54.55</b>	

**48. Grade 5 Level 2/Level 1 cut score**

Response	Frequency	Percent	Mean: 3.90
Not Confident	0	0.00	
Partially Confident	0	0.00	
Confident	1	4.55	
Very Confident	9	40.91	
<b>No Response</b>	<b>12</b>	<b>54.55</b>	

**49. Grade 6 Level 3/Level 2 cut score**

Response	Frequency	Percent	Mean: 3.64
Not Confident	0	0.00	
Partially Confident	0	0.00	
Confident	8	36.36	
Very Confident	14	63.64	

**50. Grade 6 Level 2/Level 1 cut score**

Response	Frequency	Percent	Mean: 3.50
Not Confident	0	0.00	
Partially Confident	1	4.55	
Confident	9	40.91	
Very Confident	12	54.55	

**51. Grade 7 Level 3/Level 2 cut score**

Response	Frequency	Percent	Mean: 3.50
Not Confident	0	0.00	
Partially Confident	0	0.00	
Confident	6	27.27	
Very Confident	6	27.27	
<b>No Response</b>	<b>10</b>	<b>45.45</b>	

**52. Grade 7 Level 2/Level 1 cut score**

Response	Frequency	Percent	Mean: 3.50
Not Confident	0	0.00	
Partially Confident	0	0.00	
Confident	6	27.27	
Very Confident	6	27.27	
<b>No Response</b>	<b>10</b>	<b>45.45</b>	

**53. Grade 8 Level 3/Level 2 cut score**

Response	Frequency	Percent	Mean: 3.58
Not Confident	0	0.00	<input type="text"/>
Partially Confident	0	0.00	<input type="text"/>
Confident	5	22.73	<input type="text"/>
Very Confident	7	31.82	<input type="text"/>
<b>No Response</b>	<b>10</b>	<b>45.45</b>	<input type="text"/>

**54. Grade 8 Level 2/Level 1 cut score**

Response	Frequency	Percent	Mean: 3.58
Not Confident	0	0.00	<input type="text"/>
Partially Confident	0	0.00	<input type="text"/>
Confident	5	22.73	<input type="text"/>
Very Confident	7	31.82	<input type="text"/>
<b>No Response</b>	<b>10</b>	<b>45.45</b>	<input type="text"/>

**55. Grade 11 Level 3/Level 2 cut score**

Response	Frequency	Percent	Mean: 3.50
Not Confident	0	0.00	<input type="text"/>
Partially Confident	0	0.00	<input type="text"/>
Confident	6	27.27	<input type="text"/>
Very Confident	6	27.27	<input type="text"/>
<b>No Response</b>	<b>10</b>	<b>45.45</b>	<input type="text"/>

**56. Grade 11 Level 2/Level 1 cut score**

Response	Frequency	Percent	Mean: 3.42
Not Confident	0	0.00	<input type="text"/>
Partially Confident	0	0.00	<input type="text"/>
Confident	7	31.82	<input type="text"/>
Very Confident	5	22.73	<input type="text"/>
<b>No Response</b>	<b>10</b>	<b>45.45</b>	<input type="text"/>

**57. In which group did you work?**

Response	Frequency	Percent	Mean: 1.55
Mathematics - Alt. Grades 3-6	10	45.45	<input type="text"/>
Mathematics - Alt. Grades 6-8 & 11	12	54.55	<input type="text"/>