

Standardized Assessment Tasks for
STAAR Alternate

Grade 6 Mathematics

Definitions/Examples for STAAR Reporting Category 1 (6.1) Essence Statement A

The following definitions clarify terms used in the grade 6 mathematics assessment tasks to ensure that the content of the tasks is understood. When appropriate, examples and nonexamples have been provided for further clarification. These are just examples and do not represent all the appropriate ways to test the skills in the STAAR Alternate assessment tasks.

Level 1: page 5

manipulatives – objects used during the assessment of mathematical concepts typically addressing quantity, operations, or patterns. Manipulatives are used for hands-on tasks and should be objects for which students in middle school have access and interest.

- For this Level 1 task, everyday items such as CD cases, art supplies, and pencils are examples of grade-appropriate manipulatives.
- Items like miniature bear counters and plastic dinosaurs are NOT grade-appropriate manipulatives for this task at middle school.

STAAR Reporting Category 1 – Numbers, Operations, and Quantitative Reasoning: The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.	
TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations	Essence of TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations
<p>(6.1) Number, operation, and quantitative reasoning. The student represents and uses rational numbers in a variety of equivalent forms. The student is expected to</p> <ul style="list-style-type: none"> (A) compare and order non-negative rational numbers; Supporting Standard (B) generate equivalent forms of rational numbers including whole numbers, fractions, and decimals; Readiness Standard (C) use integers to represent real-life situations; Supporting Standard (D) write prime factorizations using exponents; Supporting Standard (E) identify factors of a positive integer, common factors, and the greatest common factor of a set of positive integers; Supporting Standard (F) identify multiples of a positive integer and common multiples and the least common multiple of a set of positive integers. Supporting Standard 	<p>Essence Statement A: Uses numbers in a variety of equivalent forms.</p>

Level 3

Prerequisite skill: use concrete models of hundreds, tens, and ones to represent a given whole number (up to 999) in various ways

The student will be presented a collection of no more than nine dimes to be used as a bank for trading. The student will also be presented a collection of pennies totaling a number greater than 10 but not a multiple of 10. The student will determine how many pennies in the collection can be traded for dimes. The student will determine how many pennies are left after trading for dimes. The student will record the two-digit number that is represented by the combined value of the dimes and leftover pennies after trading.

Predetermined Criteria

1. The student will determine how many pennies in the collection can be traded for dimes.
2. The student will determine how many pennies are left after trading for dimes.
3. The student will record the two-digit number that is represented by the combined value of the dimes and leftover pennies after trading.

Process skill: identify mathematics in everyday situations

Transition

Level 2

Prerequisite skill: create sets of tens and ones using concrete objects to describe, compare, and order whole numbers

The student will be presented a two-digit number. The student will be given a collection of dimes greater than the number in the tens place and pennies greater than the number in the ones place. The student will identify the number of dimes that corresponds to the number in the tens place. The student will identify the number of pennies that corresponds to the number in the ones place. The student will match the number of dimes to the tens place and the number of pennies to the ones place in the two-digit number. The student will count the value of each coin to reach the total value of the coins.

Predetermined Criteria

1. The student will identify the number of dimes that corresponds to the number in the tens place and the number of pennies that corresponds to the number in the ones place.
2. The student will match the number of dimes to the tens place and the number of pennies to the ones place in the two-digit number.
3. The student will count the value of each coin to reach the total value of the coins.

Process skill: identify mathematics in everyday situations

Transition

Level 1

Prerequisite skill: use sets of concrete objects to represent quantities given in verbal or written form (through 20)

The student will be presented a written one-digit number. The student will be presented the same number of manipulatives as the number. The student will explore the manipulatives. The student will participate in placing the manipulatives on top of the number. The student will acknowledge the total number of objects on the number.

Predetermined Criteria

1. The student will explore the manipulatives.
2. The student will participate in placing the manipulatives on top of the number.
3. The student will acknowledge the total number of objects on the number.

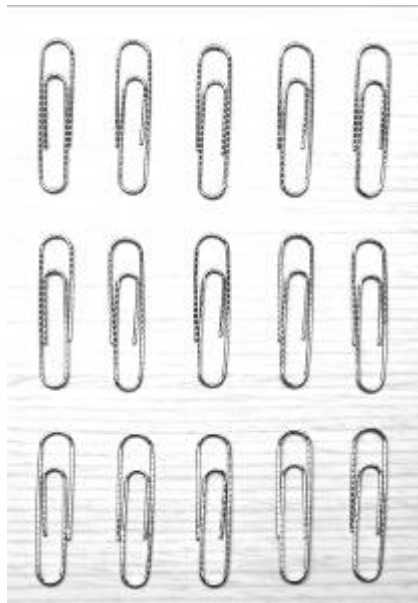
Definitions/Examples for STAAR Reporting Category 2 (6.5) Essence Statement B

The following definitions clarify terms used in the grade 6 mathematics assessment tasks to ensure that the content of the tasks is understood. When appropriate, examples and nonexamples have been provided for further clarification. These are just examples and do not represent all the appropriate ways to test the skills in the STAAR Alternate assessment tasks.

Level 2: page 8

This Level 2 task involves an arrangement of manipulatives in rows of twos, fives, or tens.

- The arrangement could be presented like the example below:



- The student will need to identify the number in each row. For the example above, the student would identify the number "five."
- The student will then need to count the accumulated total of each row. For the example above, the student would count, "five," "ten," "fifteen."
- For the final predetermined criterion, the student should match an addition equation to the arrangement of manipulatives. For the example above, the student would match the equation $5+5+5=15$ to the arrangement.

Level 1: page 8

This Level 1 task involves four containers in a row and a corresponding addition number sentence. The number sentence is missing one addend. During the task the teacher references each number in the number sentence as each number is modeled with the containers. It is important that the teacher emphasizes the connection between the numbers and the containers at each stage of the task, especially the end. It is also important that the teacher emphasizes the total, four, at the end of the task.

STAAR Reporting Category 2 – Patterns, Relationships, and Algebraic Reasoning: The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.	
TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectation	Essence of TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectation
<p>(6.5) Patterns, relationships, and algebraic thinking. The student uses letters to represent an unknown in an equation. The student is expected to</p> <p>(A) formulate equations from problem situations described by linear relationships. Readiness Standard</p>	<p>Essence Statement B: Uses symbols in equations.</p>

Level 3

Prerequisite skill: use patterns and relationships to develop strategies to remember basic addition and subtraction facts. Determine patterns in related addition and subtraction number sentences (including fact families) such as $8 + 9 = 17$, $9 + 8 = 17$, $17 - 8 = 9$, and $17 - 9 = 8$

The student will be presented an odd-numbered set of manipulatives no greater than 19. The student will organize the manipulatives into two unequal groups. The student will generate an equation for addition using the two groups of manipulatives as the addends. The student will switch the two groups of manipulatives. The student will generate a new equation reflecting the switched addends. Using the numbers, the student will generate two subtraction equations to complete the fact family.

Predetermined Criteria

1. The student will generate an equation for addition using the two groups as the addends.
2. The student will generate a new equation reflecting the switched addends.
3. The student will generate two subtraction equations to complete the fact family.

Process skill: use tools such as real objects, manipulatives, and technology to solve problems

Level 2

Prerequisite skill: use patterns to skip count by twos, fives, and tens

The student will be presented an arrangement of manipulatives in rows of twos, fives, or tens. The student will identify the number in each row. The student will count the accumulated total of each row by twos, fives, or tens. The student will match an addition equation to the arrangement of manipulatives.

Predetermined Criteria

1. The student will identify the number in each row.
2. The student will count the accumulated total of each row by twos, fives, or tens.
3. The student will match an addition equation to the arrangement of manipulatives.

Process skill: use tools such as real objects, manipulatives, and technology to solve problems

Level 1

Prerequisite skill: use patterns to predict what comes next, including cause-and-effect relationships

The student will be presented four containers in a row and the number sentence $1+1+1+\underline{\quad} = 4$. The first three containers will have one manipulative inside each container. The last container will be empty. The student will explore the manipulatives in the containers as the teacher references each number on the number sentence. After the third container, the student will anticipate exploring the fourth container. The student will participate in adding one manipulative to the last container as the teacher adds the remaining number to the number sentence.

Predetermined Criteria

1. The student will explore the manipulatives in the containers.
2. The student will anticipate exploring the fourth container.
3. The student will participate in adding one manipulative to the last container.

Definitions/Examples for STAAR Reporting Category 4 (6.8)
Essence Statement C

The following definitions clarify terms used in the grade 6 mathematics assessment tasks to ensure that the content of the tasks is understood. When appropriate, examples and nonexamples have been provided for further clarification. These are just examples and do not represent all the appropriate ways to test the skills in the STAAR Alternate assessment tasks.

Level 3: page 11

In this Level 3 task, various measurements of distance will be recorded. It is important that a number and unit of measurement are recorded for each one so comparisons can be made among the measurements.

- The measurements could be recorded like this:

10 paces	9 feet	3 yards
----------	--------	---------

- The measurements should NOT be recorded like this:

10	9	3
----	---	---

Level 2: page 11

In this Level 2 task, the student will assist in measuring lengths of three objects using one-inch cubes and a one-foot ruler. A number and a unit should be recorded for each object.

- In this task, measurements could be recorded like this:

3 cubes	3 inches
6 cubes	6 inches
12 cubes	12 inches

- The measurements should NOT be recorded like this:

3	3
6	6
12	12

STAAR Reporting Category 4 – Measurement: The student will demonstrate an understanding of the concepts and uses of measurement.	
TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations	Essence of TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations
<p>(6.8) Measurement. The student solves application problems involving estimation and measurement of length, area, time, temperature, volume, weight, and angles. The student is expected to</p> <ul style="list-style-type: none"> (A) estimate measurements (including circumference) and evaluate reasonableness of results; Supporting Standard (B) select and use appropriate units, tools, or formulas to measure and to solve problems involving length (including perimeter), area, time, temperature, volume, and weight; Readiness Standard (C) measure angles; Supporting Standard (D) convert measures within the same measurement system (customary and metric) based on relationships between units. Supporting Standard 	<p>Essence Statement C: Uses estimation, unit conversions, and measurement to solve problems.</p>

Level 3

Prerequisite skill: use linear measurement tools to estimate and measure lengths using standard units

The student will be presented a designated distance. The length of the distance must be a whole number and a multiple of three feet. The student will determine the number of paces needed to measure the distance from beginning to end. The number of paces will be recorded. The student will measure the same distance using a one-foot ruler and again using a yardstick. The measurements will be recorded. The student will compare the three measurements.

Predetermined Criteria

1. The student will determine the number of paces needed to measure the distance from beginning to end.
2. The student will measure the same distance using a one-foot ruler and again using a yardstick.
3. The student will compare the three measurements.

Process skill: use tools such as real objects, manipulatives, and technology to solve problems

Level 2

Prerequisite skill: compare and order two or more concrete objects according to length (from longest to shortest)

The student will be presented three objects of different lengths with the longest object having a length of exactly one foot. The student will be given numerous one-inch cubes. The student will assist in measuring each object using the one-inch cubes. The length of each object will be recorded in number of cubes. The student will be presented a one-foot ruler. The student will assist in measuring each object again with the ruler. The length of each object will be recorded in inches. The student will identify the object that is equal to the one-foot ruler. The student will identify a statement that describes how many inches are equal to one foot.

Predetermined Criteria

1. The student will assist in measuring each object using one-inch cubes and a one-foot ruler.
2. The student will identify the object that is equal to the one-foot ruler.
3. The student will identify a statement that describes how many inches are equal to one foot.

Process skill: use tools such as real objects, manipulatives, and technology to solve problems

Mathematics Grade 6; Reporting Category 4 (6.8); Essence Statement: C

Level 1

Prerequisite skill: compare and order two or three concrete objects according to length (longer/shorter than, or the same)

The student will be presented a ruler. The student will explore the length of the ruler. The student will be presented twelve one-inch cubes, each consisting of the same physical characteristic. The student will participate in placing the cubes end-to-end next to the ruler. The student will experience the length of the twelve one-inch cubes in relation to the length of the ruler.

Predetermined Criteria

1. The student will explore the length of the ruler.
2. The student will participate in placing the cubes end-to-end next to the ruler.
3. The student will experience the length of the twelve one-inch cubes in relation to the length of the ruler.

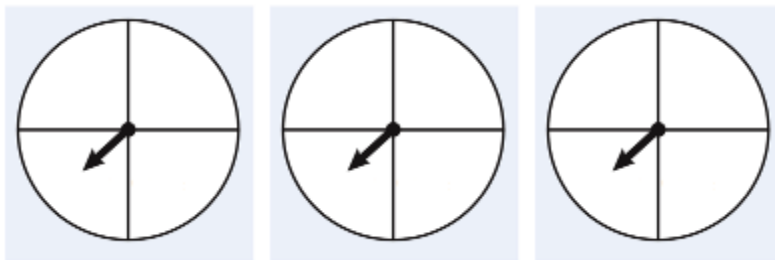
**Definitions/Examples for STAAR Reporting Category 5 (6.10)
Essence Statement D**

The following definitions clarify terms used in the grade 6 mathematics assessment tasks to ensure that the content of the tasks is understood. When appropriate, examples and nonexamples have been provided for further clarification. These are just examples and do not represent all the appropriate ways to test the skills in the STAAR Alternate assessment tasks.

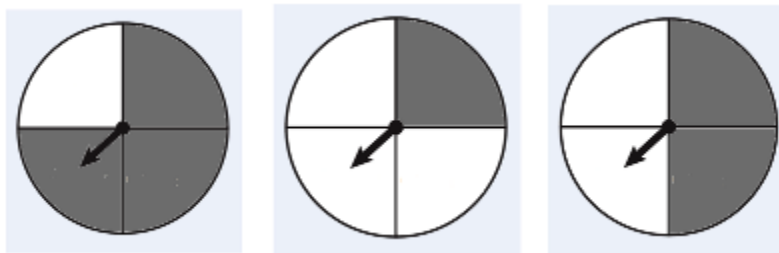
Level 3: page 15

This Level 3 task involves three identical blank spinners each divided into an equal number of parts greater than or equal to four.

- The student could be presented blank spinners like the ones below:



- The student will determine how to mark the spinners so that the data would most likely produce more of one outcome, less of one outcome, and two equally likely outcomes when spun multiple times. Marked spinners example:



Most Likely

Least Likely

Equally Likely

Level 2: page 15

This Level 2 task requires a student to be presented with significantly more of one kind of object than another kind of object; the results of the draws should significantly favor one outcome over the other. Ratios like 20 to 3, 15 to 2, or 10 to 1 would be appropriate.

STAAR Reporting Category 5 – Probability and Statistics: The student will demonstrate an understanding of probability and statistics.	
TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations	Essence of TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations
<p>(6.10) Probability and statistics. The student uses statistical representations to analyze data. The student is expected to</p> <ul style="list-style-type: none"> (A) select and use an appropriate representation for presenting and displaying different graphical representations of the same data including line plot, line graph, bar graph, and stem and leaf plot; Supporting Standard (B) identify mean (using [concrete objects and] pictorial models), median, mode, and range of a set of data; Supporting Standard (C) sketch circle graphs to display data; Supporting Standard (D) solve problems by collecting, organizing, displaying, and interpreting data. Readiness Standard 	<p>Essence Statement D: Displays and solves problems using data.</p>

Level 3

Prerequisite skill: use data to describe events as more likely than, less likely than, or equally likely as

The student will be presented three identical blank spinners each divided into an even number of equal parts greater than or equal to four. The student will determine how to mark one spinner so that the data would most likely produce more of one outcome when spun multiple times. The student will determine how to mark one spinner so that the data would be less likely to produce one outcome when spun multiple times. The student will determine how to mark one spinner so that the data would reflect that each of two outcomes would be equally as likely to occur after being spun multiple times.

Predetermined Criteria

1. The student will determine how to mark one spinner so that the data would most likely produce more of one outcome when spun multiple times.
2. The student will determine how to mark one spinner so that the data would be less likely to produce one outcome when spun multiple times.
3. The student will determine how to mark one spinner so that the data would reflect that each of two outcomes would be equally as likely to occur after being spun multiple times.

Process skill: relate informal language to mathematical language and symbols

Level 2

Prerequisite skill: use data to describe events as more likely or less likely such as drawing a certain color marker from a bag of seven red markers and three green markers

The student will be presented a group of identical objects and a second group of identical objects that are different from the first group. One group will have significantly more objects than the other group. The student will count the number of objects in each group. All objects will be placed in a container. The student will assist in drawing objects out of the container one at a time and recording the results as data. The objects will be placed back into the container after each draw. After numerous draws have been performed, the student will identify the object most likely to be drawn from the container on the next draw.

Predetermined Criteria

1. The student will count the number of objects in each group.
2. The student will assist in drawing objects out of the container one at a time and recording the results as data.
3. The student will identify the object most likely to be drawn from the container on the next draw.

Process skill: explain and record observations using objects, words, pictures, numbers, and technology

Mathematics Grade 6; Reporting Category 5 (6.10); Essence Statement: D

Level 1

Prerequisite skill: use information from a graph of real objects or pictures in order to answer questions

The student will be presented ten identical objects and a two-column graph. One column will be labeled for graphing the identical objects and the other column will be labeled for a different object of which none will be provided. The student will explore the ten identical objects. The ten objects will be placed in a container. As the objects are drawn one at a time from the container, the student will participate in placing the objects on the graph. The student will respond to the graph after several draws. Before removing the last object, the student will anticipate the object that is most likely to be drawn from the container.

Predetermined Criteria

1. The student will participate in placing the objects on the graph.
2. The student will respond to the graph after several draws.
3. The student will anticipate the object that is most likely to be drawn from the container.