

Standardized Assessment Tasks for
STAAR Alternate

Grade 4 Mathematics

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>(4.1) Number, operation, and quantitative reasoning. The student uses place value to represent whole numbers and decimals. The student is expected to</p> <p>(A) use place value to read, write, compare, and order whole numbers through 999,999,999; Supporting Standard</p> <p>(B) use place value to read, write, compare, and order decimals involving tenths and hundredths, including money, using [concrete objects and] pictorial models. Readiness Standard</p>	<p>Essence Statement A: Uses place value to demonstrate understanding of numbers.</p>

Level 3

Prerequisite skill: compare and order whole numbers up to 99 (less than, greater than, or equal to) using sets of concrete objects and pictorial models

The student will be presented a group of at least 30 objects that have already been divided into three groups. Each group must contain a different number of objects, and no group should have more than 15 objects. The student will determine the number of objects in each group. The student will be presented a number line containing only hash marks representing numbers one to 15. The student will record the number of objects in each group on the number line. The student will record the missing numbers on the number line using appropriate place value.

Predetermined Criteria

1. The student will determine the number of objects in each group.
2. The student will record the number of objects in each group on the number line.
3. The student will record the missing numbers on the number line using appropriate place value.

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

Level 2

Prerequisite skill: use one-to-one correspondence and language such as more than, same number as, or two less than to describe relative sizes of sets of concrete objects

The student will be presented three groups of objects. Two groups will have quantities representing different one-digit numbers, and the other group will have a quantity representing a two-digit number. The student will count the objects in each group. The student will identify the written number that corresponds to the quantity in each group. The student will identify the group that has the most.

Predetermined Criteria

1. The student will count the objects in each group.
2. The student will identify the written number that corresponds to the quantity in each group.
3. The student will identify the group that has the most.

Process skill: communicate mathematical ideas using objects, words, pictures, numbers, and technology

Level 1

Prerequisite skill: know that objects, or parts of an object, can be counted

The student will be presented two groups of objects. One group will have one object, and the other group will have 10 objects. The student will explore the number of objects in each group. The objects in each group will be counted and recorded. The student will participate in pairing the written number that corresponds to the quantity in each group. The student will acknowledge the group that has more objects.

Predetermined Criteria

1. The student will explore the number of objects in each group.
2. The student will participate in pairing the written number that corresponds to the quantity in each group.
3. The student will acknowledge the group that has more objects.

Definitions/Examples for STAAR Reporting Category 2 (4.7) Essence Statement B

The following definitions clarify terms used in the grade 4 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.

Levels 3, 2, and 1: pages 5 and 6

pattern – an arrangement that repeats according to a rule. There should be at least three repeating iterations/strands to establish a pattern.

- For the Level 3 task on page five, a pattern of one item per one delivery location is appropriate. There should be numerous delivery locations with at least three items available for delivery to the first three locations.
- For the Level 2 task on page six, a pattern of one item per one container is appropriate. There should be 10 containers for this task with at least the first three containers in the row filled with one object each.
- For the Level 1 task on page six, a pattern of one item per one container is appropriate. There should be exactly three containers for 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>(4.7) Patterns, relationships, and algebraic thinking. The student uses organizational structures to analyze and describe patterns and relationships. The student is expected to</p> <p>(A) describe the relationship between two sets of related data such as ordered pairs in a table. Readiness Standard</p>	<p>Essence Statement B: Recognizes relationships between sets.</p>

Level 3

Prerequisite skill: identify, describe, and extend repeating and additive patterns to make predictions and solve problems

The student will be presented a real-life situation in which he or she is given a set of items to distribute to multiple locations. A one-to-one pattern of one item to one location should be established, but the number of locations will be greater than the number of items given to the student. After the items have been distributed, the student will conclude why the task cannot be completed. The student will determine the number of times the pattern will need to be extended for each location to receive an item to complete this delivery. The student will determine how many items he or she will need for the next delivery to provide equal distribution to the same locations.

Predetermined Criteria

1. The student will conclude why the task cannot be completed.
2. The student will determine the number of times the pattern will need to be extended for each location to receive an item to complete this delivery.
3. The student will determine how many items he or she will need for the next delivery to provide equal distribution to the same locations.

Process skill: identify mathematics in everyday situations

Transition

Mathematics Grade 4; Reporting Category 2 (4.7); Essence Statement: B

Level 2

Prerequisite skill: identify, describe, and extend concrete and pictorial patterns in order to make predictions and solve problems

The student will be presented 10 containers in a row. The first few containers in the row will contain one object each. The student will identify how many objects are in each container. The student will identify how many objects are needed so that each remaining container receives one object. The student will be provided the number of objects he or she indicated. The student will assist in placing one object in each of the remaining containers to complete the pattern.

Predetermined Criteria

1. The student will identify how many objects are in each container.
2. The student will identify how many objects are needed so that each remaining container receives one object.
3. The student will assist in placing one object in each of the remaining containers to complete the pattern.

Process skill: identify mathematics in everyday situations

Transition

Level 1

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

The student will be presented three empty containers and three identical objects. The student will participate in placing the first object, paired with a sensory experience, into the first container and the second object, paired with a sensory experience, into the second container. When a third container is approached, the student will anticipate that an object needs to be added to complete the pattern. The student will participate in completing the pattern by adding the third object, paired with the sensory experience, to the third container.

Predetermined Criteria

1. The student will participate in placing the first object, paired with a sensory experience, into the first container and the second object, paired with a sensory experience, into the second container.
2. The student will anticipate that an object needs to be added to complete the pattern.
3. The student will participate in completing the pattern by adding the third object, paired with the sensory experience, to the third container.

Mathematics Grade 4; Reporting Category 2 (4.7); Essence Statement: B



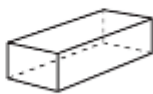

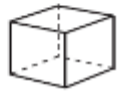

Definitions/Examples for STAAR Reporting Category 3 (4.8) Essence Statement C

The following definitions clarify terms used in the grade 4 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.

Levels 3 and 2: pages 9 and 10

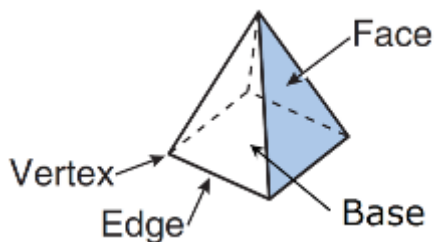
three-dimensional figures – geometric figures that have length, width, and height.

- See the tables below for some examples of three-dimensional figures appropriate for the Level 3 and Level 2 tasks:

Figure	Example	Figure	Example
Triangular prism		Cylinder	
Rectangular prism		Cone	
Cube		Sphere	

geometric attribute – a characteristic of a geometric figure.

- Attributes of three-dimensional figures can include number of faces (a flat surface of a three-dimensional figure), shapes of faces, shape of base (a flat surface that makes up what is considered to be the bottom of the figure), number of edges (a line segment where two faces meet), and number of vertices (the point where three or more edges meet).
- See example below:



- Color, size, texture, height, and the name of a figure are NOT geometric attributes.

two-dimensional figures – flat geometric figures that have length and width.

- Triangles, rectangles, squares, and circles are appropriate for this Level 1 task.
- In the task, a square-shaped template drawn on a sheet of paper can contain two right triangles, a rectangular template can contain two squares, a triangular template can contain two right triangles, or a circular template can contain two semi-circles.

STAAR Reporting Category 3 – Geometry and Spatial Reasoning: The student will demonstrate an understanding of geometry and spatial reasoning.	
TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations	Essence of TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations
<p>(4.8) Geometry and spatial reasoning. The student identifies and describes attributes of geometric figures using formal geometric language. The student is expected to</p> <ul style="list-style-type: none"> (A) identify and describe right, acute, and obtuse angles; Supporting Standard (B) identify and describe parallel and intersecting (including perpendicular) lines using [concrete objects and] pictorial models; Supporting Standard (C) use essential attributes to define two- and three-dimensional geometric figures. Readiness Standard 	<p>Essence Statement C: Uses attributes to identify geometric figures.</p>

Level 3

Prerequisite skill: describe and identify three-dimensional geometric figures, including spheres, rectangular prisms (including cubes), cylinders, and cones

The student will be presented a wide array of real-life objects in the shape of three-dimensional geometric figures. The student will classify the objects by geometric attributes. The student will justify the way he or she classified the objects. The student will locate an additional object for each group of three-dimensional geometric figures from the classroom environment.

Predetermined Criteria

1. The student will classify the objects by geometric attributes.
2. The student will justify the way he or she classified the objects.
3. The student will locate an additional object for each group of three-dimensional geometric figures from the classroom environment.

Process skill: justify his or her thinking using objects, words, pictures, numbers, and technology

Level 2

Prerequisite skill: compare two objects based on their attributes

The student will be presented four real-life objects in the shape of three-dimensional geometric figures, one of which will be a cylinder. The student will identify the cylinder from the group of objects. The student will identify the shape of the cylinder's base. The student will identify one attribute for each of the remaining objects.

Predetermined Criteria

1. The student will identify the cylinder from the group of objects.
2. The student will identify the shape of the cylinder's base.
3. The student will identify one attribute for each of the remaining objects.

Process skill: communicate mathematical ideas using objects, words, pictures, numbers and technology

Level 1

Prerequisite skill: create shapes

The student will be presented two identical two-dimensional geometric figures that when joined together will form a new geometric figure. The student will explore the two-dimensional figures. The student will be presented a template of the new geometric figure that will be formed. The student will participate in placing the two geometric figures on the template to form the new figure. The student will experience the entire surface of the new figure.

Predetermined Criteria

1. The student will explore the two-dimensional figures.
2. The student will participate in placing the two geometric figures on the template to form the new figure.
3. The student will experience the entire surface of the new figure.

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>(4.12) Measurement. The student applies measurement concepts. The student measures time and temperature (in degrees Fahrenheit and Celsius). The student is expected to</p> <p>(A) use a thermometer to measure temperature and changes in temperature; Supporting Standard</p> <p>(B) use tools such as a clock with gears or a stopwatch to solve problems involving elapsed time. Supporting Standard</p>	<p>Essence Statement D: Uses temperature and time to solve problems.</p>

Level 3

Prerequisite skill: read a thermometer to gather data

The student will be presented a real-life problem that requires measuring the temperature for a specific purpose. From a wide array of measurement tools, the student will select an appropriate tool for measuring temperature for the real-life problem. The student will measure the temperature using the thermometer. The student will generate a conclusion about the temperature.

Predetermined Criteria

1. The student will select an appropriate tool for measuring temperature for the real-life problem.
2. The student will measure the temperature using the thermometer.
3. The student will generate a conclusion about the temperature.

Process skill: identify mathematics in everyday situations

Transition

Level 2

Prerequisite skill: compare and order two or more objects according to relative temperature (from hottest to coldest)

The student will be presented three containers of water, one with chilled water, one with room-temperature water, and one with warm water in random order. The student will examine the water in the containers. The student will arrange the containers in order from warmest to coldest. The student will match each container to a representation for "warm," "cold," or "room temperature."

Predetermined Criteria

1. The student will examine the water in the containers.
2. The student will arrange the containers in order from warmest to coldest.
3. The student will match each container to a representation for "warm," "cold," or "room temperature."

Process skill: identify mathematics in everyday situations

Level 1

Prerequisite skill: compare situations or objects according to relative temperature (hotter/colder than, or the same as)

The student will participate in gathering cold and warm objects from their typical storage locations. The student will respond to the cold objects. The student will respond differently to the warm objects.

Predetermined Criteria

1. The student will participate in gathering cold and warm objects.
2. The student will respond to the cold objects.
3. The student will respond differently to the warm objects.

Transition