TEST INSTRUCTIONS

GRADE 7
Mathematics
STAAR Alternate 2

Administered April 2023

RELEASED

Texas Essential Knowledge and Skills (TEKS) Curriculum Assessed

Math Grade 7	Cluster 1
Reporting Category 2	Computations and Algebraic Relationships : The student will demonstrate an understanding of how to perform operations and represent algebraic relationships.
Knowledge and Skills Statement 7.4	The student applies mathematical process standards to represent and solve problems involving proportional relationships.
Essence Statement	Solves problems involving ratios, rates, or percents.
Item 1 Prerequisite Skill	represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences (1)
Item 2 Prerequisite Skill	represent real - world relationships using number pairs in a table and verbal descriptions (3)
Item 3 Prerequisite Skill	represent real - world relationships using number pairs in a table and verbal descriptions (3)
Item 4 Prerequisite Skill	represent problems using an input - output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence (4)

Math Grade 7	Cluster 2
Reporting Category 1	Probability and Numerical Relationships : The student will demonstrate an understanding of how to represent probabilities and numbers.
Knowledge and Skills Statement 7.6	The student applies mathematical process standards to use probability and statistics to describe or solve problems involving proportional relationships.
Essence Statement	Uses probability to solve problems involving 7 (li)-7 (5.9 (lv)-2.3 (i)-7 (n)-1.4 (0 TD

Math Grade 7	Cluster 4
Reporting Category 3	Geometry and Measurement : The student will demonstrate an understanding of how to represent and apply geometry and measurement concepts.
Knowledge and Skills Statement 7.9	The student applies mathematical process standards to solve geometric problems.
Essence Statement	Solves problems involving circumference, area, or volume of two - or three -dimensional geometric figures.
Item 13 Prerequisite Skill	use concrete models of square units to find the area of a rectangle by covering it with no gaps or overlaps, counting to find the total number of square units, and describing the measurement using a number and the unit (2)
Item 14 Prerequisite Skill	use concrete models of square units to find the area of a rectangle by covering it with no gaps or overlaps, counting to find the total number of square units, and describing the measurement using a number and the unit (2)
Item 15 Prerequisite Skill	solve problems related to perimeter and area of rectangles where dimensions are whole numbers (4)
Item 16 Prerequisite Skill	solve problems related to perimeter and area of rectangles where dimensions are whole numbers (4)

Math Grade 7	Cluster 5
Reporting Category 2	Computations and Algebraic Relationships : The student will demonstrate an understanding of how to perform operations and represent algebraic relationships.
Knowledge and Skills Statement 7.10	The student applies mathematical process standards to use one - variable equations and inequalities to represent situations.
Essence Statement	Uses equations or inequalities to model real -life situations.
Item 17 Prerequisite Skill	represent and solve one - and two -step multiplication and division problems within 100 using arrays, strip diagrams, and equations (3)
Item 18 Prerequisite Skill	represent and solve one - and two -step multiplication and division problems within 100 using arrays, strip diagrams, and equations (3)
Item 19 Prerequisite Skill	determine the unknown whole number in a multiplication or division equation relating three whole numbers when the unknown is either a missing factor or product (3)
Item 20 Prerequisite Skill	represent multi -step problems involving the four operations with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity (4)

MATHEMATICS

Presentation Instructions for Question 1

- Present Stimulus 1.
- Direct the student to Stimulus 1. Communicate: Abby has two bracelets with beads. She can find the number of beads on both bracelets by adding six beads plus six beads.
- Communicate: Find the model that shows six beads plus six beads.

Stimulus 1

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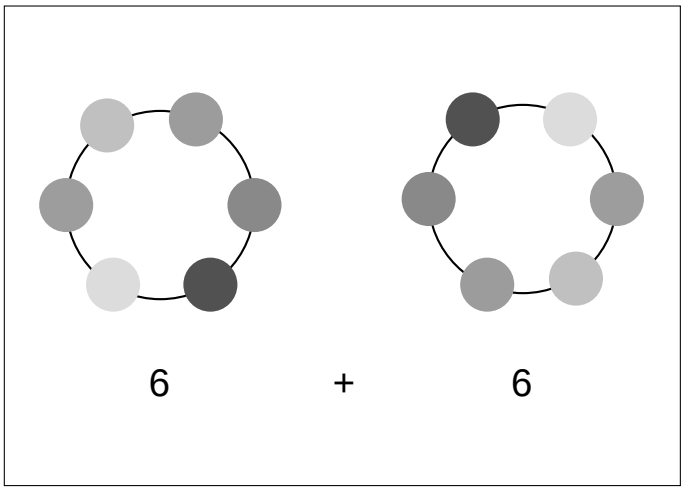

Presentation Instructions for Question 2

- Present Stimulus 2a and 2b.
- Direct the student to Stimulus 2a. Communicate: Abby makes two bracelets for her friend. She uses six beads for each bracelet. Communicate the information in the table.
- Direct the student to each answer choice in Stimulus 2b. Communicate: Twelve beads. Ten beads.
- Communicate: Find the model that shows the number of beads Abby uses to make the bracelets.

Stimulus 2a

Number of Bracelets	Total Number of Beads
1	6
2	12

Stimulus 2b

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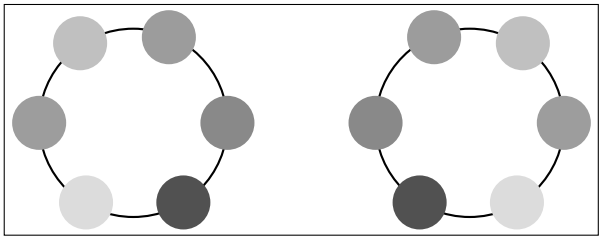
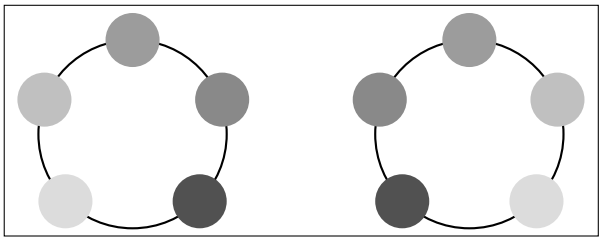




Presentation Instructions for Question 3

- Present Stimulus 3a and 3b.
- Direct the student to Stimulus 3a. Communicate: Abby sells her bracelets at the craft fair. This table shows the amount of money needed to buy one, two, and three bracelets. Each bracelet costs the same amount of money. Communicate the information in the table.
- Direct the student to the stem and each answer choice in Stimulus 3b. Communicate the text in the stem and each answer choice.
- Communicate: Find the phrase that describes the relationship in the table between the number of bracelets sold and the total cost of the bracelets.

Stimulus 3a

Number of Bracelets	Total Cost
1	$5
2	$10
3	$15

Stimulus 3b

The table shows a relationship of —

“plus $4”

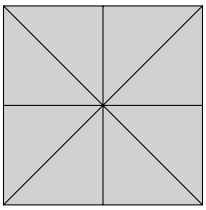
“times $2”

* “times $5”

Presentation Instructions for Question 6

- Present Stimulus 6a and 6b.
- Direct the student to Stimulus 6a. Communicate: This square is divided into eight equal pieces, or eighths.
- Direct the student to each answer choice in Stimulus 6b. Communicate: This square is divided into eight equal pieces, or eighths. This square is divided into eight pieces.
- Communicate: Find the square that is divided into eighths.

Stimulus 6a



Stimulus 6b

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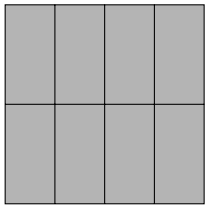
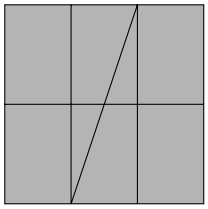
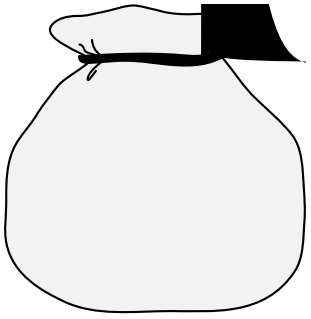




Presentation Instructions for Question 7

- Present Stimulus 7a and 7b.
- Direct the student to Stimulus 7a. Communicate: This is a bag with two square pattern blocks, three triangle pattern blocks, and three hexagon pattern blocks.
- Direct the student to each answer choice in Stimulus 7b. Communicate the information in each answer choice.
- Communicate: Find the fraction that shows the chance of selecting a triangle pattern block from the bag.

Stimulus 7a

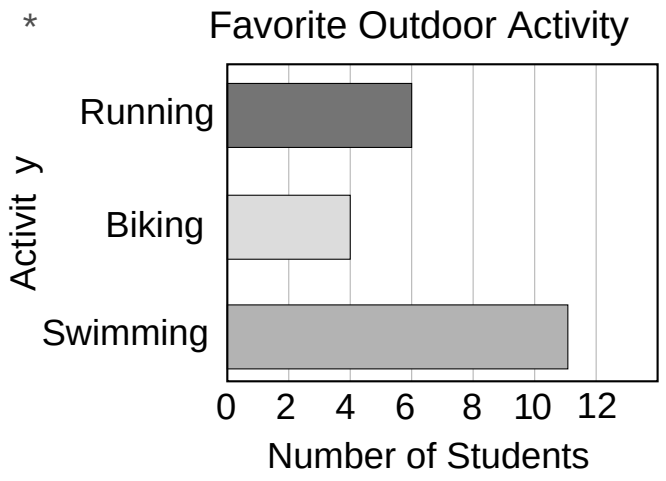


Scoring Instructions		
Student Action		Test Administrator Action
If the student finds "$\frac{3}{8}$" in Stimulus 7b,		mark A for question 7 and move to question 8.
If the student does not find "$\frac{3}{8}$" in Stimulus 7b,		provide one of these allowable teacher assists to the student: • Highlight the numerators in the fractions in Stimulus 7b. OR • Use manipulatives to demonstrate the scenario in Stimulus 7a. OR • Have the student count and identify each shape in Stimulus 7a. Replicate the initial presentation instructions.
After the selected teacher assistance, if the student finds "$\frac{3}{8}$" in Stimulus 7b,		mark B for question 7 and move to question 8.
After the selected teacher assistance, if the student does not find "$\frac{3}{8}$" in Stimulus 7b,		mark C for question 7 and move to question 8.

Presentation Instructions for Question 9

- Present Stimulus 9.
- Direct the student to Stimulus 9. Communicate: A seventh-grade class started recording each student's favorite outdoor activity. This bar graph shows the number of students who chose each activity. Communicate the information in the bar graph.
- Communicate: Find the bar graph that shows the favorite outdoor activities of the students in the class.

Stimulus 9



Scoring Instructions		
Student Action		Test Administrator Action
If the student finds the bar graph,		mark A for question 9 and move to question 10.
If the student does not find the bar graph,		• remove the stimulus; • wait at least five seconds; and • replicate the initial presentation instructions.
After the five-second wait time, if the student finds the bar graph,		mark B for question 9 and move to question 10.
After the five-second wait time, if the student does not find the bar graph,		mark C for question 9 and move to question 10.

Presentation Instructions for Question 10

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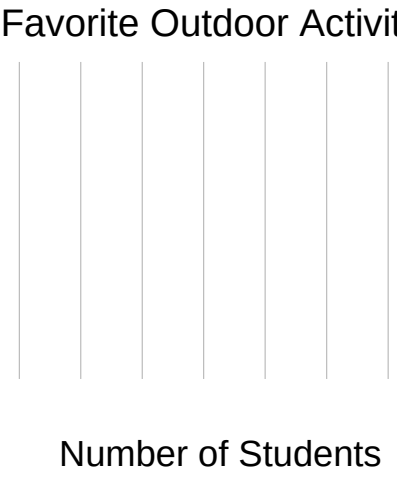
Presentation Instructions for Question 11

- Present Stimulus 11a and 11b.
- Direct the student to Stimulus 11a. Communicate: The seventh-grade class continued to record each student's favorite outdoor activity. This bar graph shows the number of students who chose each activity.
- Direct the student to each answer choice in Stimulus 11b. Communicate the information in each answer choice.
- Communicate: Find the total number of students in this seventh-grade class who chose their favorite outdoor activity.

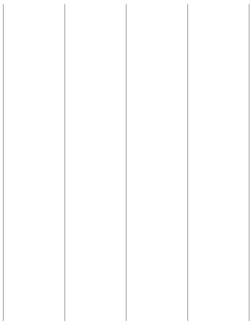
Stimulus 11a



Presentation Instructions for Question 12

- Present Stimulus 12a and 12b.
- Direct the student to Stimulus 12a. Communicate: This bar graph shows the number of students in a seventh-grade class who chose running, biking, or swimming as their favorite outdoor activity.
- Direct the student to each answer choice in Stimulus 12b. Communicate the information in each answer choice.
- Communicate: Find how many more students chose running as their favorite outdoor activity than chose biking.

Stimulus 12a

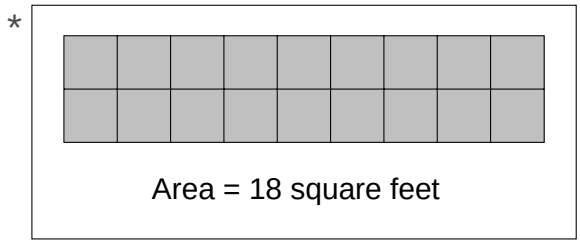


Number of Students

Presentation Instructions for Question 13

- Present Stimulus 13.
- Direct the student to Stimulus 13. Communicate: Part of a backyard patio is being covered with square stones. Each stone is 1 square foot. The area of the backyard patio being covered is 18 square feet.
- Communicate: Find the area of the backyard patio that is 18 square feet.

Stimulus 13



Scoring Instructions		
Student Action		Test Administrator Action
If the student finds the model,		mark A for question 13 and move to question 14.
If the student does not find the model,		• remove the stimulus; • wait at least five seconds; and • replicate the initial presentation instructions.
After the five-second wait time, if the student finds the model,		mark B for question 13 and move to question 14.
After the five-second wait time, if the student does not find the model,		mark C for question 13 and move to question 14.

Presentation Instructions for Question 14

- Present Stimulus 14a and 14b.
- Direct the student to Stimulus 14a. Communicate: Part of a backyard patio is being covered with square stones. Each stone is 1 square foot. The area of the backyard patio being covered is 18 square feet.
- Direct the student to each answer choice in Stimulus 14b. Communicate: Here are two other sections of the backyard patio covered by square stones.
- Communicate: Find the part of the backyard patio with an area of 18 square feet.

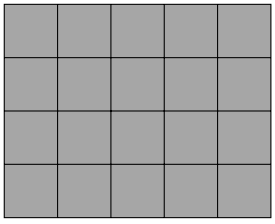
Stimulus 14a

Presentation Instructions for Question 15

- Present Stimulus 15a and 15b.
- Direct the student to Stimulus 15a. Communicate: Part of a backyard is covered with squares of grass sod. Each square of grass sod is 1 square foot. Communicate the information in Stimulus 15a.
- Direct the student to each answer choice in Stimulus 15b. Communicate the information in each answer choice.
- Communicate: Find the total area of the backyard that is covered with grass sod.

Stimulus 15a

5 feet



4 feet

Area = length × width

$A = l \times w$

Stimulus 15b

25 square feet

* 20 square feet

9 square feet

Scoring Instructions		
Student Action		Test Administrator Action
If the student finds “20 square feet” in Stimulus 15b,		mark A for question 15 and move to question 16.
If the student does not find “20 square feet” in Stimulus 15b,		provide one of these allowable teacher assists to the student: • Have the student use a calculator or math chart. OR • Point to each square in Stimulus 15a as the student counts the squares from 1 to 20. OR • Highlight the first row and the first column in Stimulus 15a. OR • Have the student number each square in Stimulus 15a. Replicate the initial presentation instructions.
After the selected teacher assistance, if the student finds “20 square feet” in Stimulus 15b,		mark B for question 15 and move to question 16.
After the selected teacher assistance, if the student does not find “20 square feet” in Stimulus 15b,		mark C for question 15 and move to question 16.

Presentation Instructions for Question 16

- Present Stimulus 16a and 16b.
- Direct the student to Stimulus 16a. Commu7tus 16a.

Presentation Instructions for Question 19

- Present Stimulus 19a and 19b.
- Direct the student to Stimulus 19a. Communicate: Melanie wants to also put candles on the tables. She has a box of 60 candles that will be divided equally among 6 tables. The number of candles that will be on each table is missing.
- Direct the student to each answer choice in Stimulus 19b. Communicate the information in each answer choice.
- Communicate: Find the number of candles that will be on each table.

Stimulus 19a

$60 \div \quad = 6 \qquad 6$

Presentation Instructions for Question 20

- Present Stimulus 20a and 20b.
- Direct the student to Stimulus 20a. Communicate: Melanie divides 72 balloons equally among the 6 tables at the school banquet. Four of the balloons at Melanie's table pop.
- Direct the student to each answer choice in Stimulus 20b. Communicate the information in each answer choice.
- Communicate: Find the number of balloons that are left at Melanie's table.

Stimulus 20a

$$(72 \div 6) - 4 = \square$$

Stimulus 20b

* 8

70

16