



State of Texas Assessments of Academic Readiness

TEST INSTRUCTIONS

Algebra I

STAAR Alternate 2

Administered April 2023

RELEASED

Texas Essential Knowledge and Skills (TEKS) Curriculum Assessed

Algebra I		Cluster 1
Reporting Category 5	Exponential Functions and Equations: The student will demonstrate an understanding of how to describe and write exponential functions and equations	
Knowledge and Skills Statement A.9	The student applies the mathematical process standards when using properties of exponential functions and their related transformations to write, graph, and represent in multiple ways exponential equations and evaluate, with and without technology, the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data.	
Essence Statement	Uses exponential functions to model or solve problems using real-world data.	
Item 1 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)	
Item 2 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)	
Item 3 Prerequisite Skill	represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity (5)	
Item 4 Prerequisite Skill	solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot (5)	

Algebra I		Cluster 2
Reporting Category 3	Writing and Solving Linear Functions, Equations, and Inequalities: The student will demonstrate an understanding of how to write and solve linear functions, equations, and inequalities.	
Knowledge and Skills Statement A.5	The student applies the mathematical process standards to solve, with and without technology, linear equations and evaluate the reasonableness of their solutions.	
Essence Statement	Solves linear equations, inequalities, and systems.	
Item 5 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 6 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)	
Item 7 Prerequisite Skill	represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity (5)	
Item 8 Prerequisite Skill	represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity (5)	

Algebra I		Cluster 3
Reporting Category 1	Number and Algebraic Methods: The student will demonstrate an understanding of how to use algebraic methods to manipulate numbers, expressions, and equations.	
Knowledge and Skills Statement A.11	The student applies the mathematical process standards and algebraic methods to rewrite algebraic expressions into equivalent forms.	
Essence Statement	Simplifies expressions.	
Item 9 Prerequisite Skill	use standard, word, and expanded forms to represent numbers up to 1,200 (2)	
Item 10 Prerequisite Skill	compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate (3)	
Item 11 Prerequisite Skill	generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization (6)	
Item 12 Prerequisite Skill	generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization (6)	

Algebra I		Cluster 4
Reporting Category 2	Describing and Graphing Linear Functions, Equations, and Inequalities: The student will demonstrate an understanding of how to describe and graph linear functions, equations, and inequalities.	
Knowledge and Skills Statement A.3	The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations.	
Essence Statement	Determines key features or graphical solutions for linear functions.	
Item 13 Prerequisite Skill	represent real-world relationships using number pairs in a table and verbal descriptions (3)	
Item 14 Prerequisite Skill	represent real-world relationships using number pairs in a table and verbal descriptions (3)	
Item 15 Prerequisite Skill	generate a numerical pattern when given a rule in the form $y = ax$ or $y = x + a$ and graph (5)	
Item 16 Prerequisite Skill	represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions (6)	

Algebra I		Cluster 5
Reporting Category 4	Quadratic Functions and Equations: The student will demonstrate an understanding of how to describe, write, and solve quadratic functions and equations.	
Knowledge and Skills Statement A.7	The student applies the mathematical process standards when using graphs of quadratic functions and their related transformations to represent in multiple ways and determine, with and without technology, the solutions to equations.	
Essence Statement	Recognizes graphs and attributes of quadratic functions.	
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 the product of 2 two-digit numbers using arrays, area models, or equations, including perfect squares through 15 by 15 (4)	
Item 19 Prerequisite Skill	generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization (6)	
Item 20 Prerequisite Skill	write an equation that represents the relationship between independent and dependent quantities from a table (6)	

ALGEBRA I

Presentation Instructions for Question 1

- *Present* Stimulus 1.
- *Direct* the student to Stimulus 1. *Communicate*: **This table shows a multiplication pattern. Each row is multiplied by another four to get the output number.** *Communicate* the information in the table.
- *Communicate*: **Find the table that shows a multiplication pattern.**

Stimulus 1

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Input	Process	Output
1	$1 \times 4 = 1 \times 4^1$	4
2	$1 \times 4 \times 4 = 1 \times 4^2$	16
3	$1 \times 4 \times 4 \times 4 = 1 \times 4^3$	64

Scoring Instructions		
Student Action		Test Administrator Action
If the student finds the table,	➡	mark A for question 1 and move to question 2.
If the student does not find the table,	➡	<ul style="list-style-type: none">• 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 table,	➡	mark B for question 1 and move to question 2.
After the five-second wait time, if the student does not find the table,	➡	mark C for question 1 and move to question 2.

Presentation Instructions for Question 2

- Present Stimulus 2a and 2b.
- Direct the student to Stimulus 2a. *Communicate*: This table shows a multiplication pattern. Each row is multiplied by another four to get the output number. *Communicate* the information in the table.
- Direct the student to each answer choice in Stimulus 2b. *Communicate* the information in each answer choice.
- *Communicate*: Find the row with the same multiplication pattern as the table.

Stimulus 2a

Input	Process	Output
1	$1 \times 4 = 1 \times 4^1$	4
2	$1 \times 4 \times 4 = 1 \times 4^2$	16
3	$1 \times 4 \times 4 \times 4 = 1 \times 4^3$	64

Stimulus 2b

4	$4 \times 4 = 4 \times 4$	16
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4	$1 \times 4 \times 4 \times 4 \times 4 = 1 \times 4^4$	256
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Scoring Instructions

Student Action	Test Administrator Action
If the student finds the row with the output of 256 in Stimulus 2b,	➡ mark A for question 2 and move to question 3.
If the student does not find the row with the output of 256 in Stimulus 2b,	➡ <ul style="list-style-type: none"> • model the desired student action by finding the row with the output of 256 in Stimulus 2b and <i>communicate</i> “This row shows the same multiplication pattern as the table”; and • replicate the initial presentation instructions.
After teacher modeling, if the student finds the row with the output of 256 in Stimulus 2b,	➡ mark B for question 2 and move to question 3.
After teacher modeling, if the student does not find the row with the output of 256 in Stimulus 2b,	➡ mark C for question 2 and move to question 3.

Presentation Instructions for Question 3

- Present Stimulus 3a and 3b.
- Direct the student to Stimulus 3a. *Communicate*: Joey is knitting a blanket. This table shows the length of the blanket each week. Some of the information is missing. *Communicate* the information in the table.
- Direct the student to each answer choice in Stimulus 3b. *Communicate* the information in each answer choice.
- *Communicate*: Find the equation that shows the length of the blanket after four weeks.

Stimulus 3a

Week	Process	Length (inches)
1	$8 \times 2 = 8 \times 2^1$	16
2	$8 \times 2 \times 2 = 8 \times 2^2$	32
3	$8 \times 2 \times 2 \times 2 = 8 \times 2^3$	64
4		

Stimulus 3b

*

$8 \times 2 \times 2 \times 2 \times 2 = 8 \times 2^4$	128
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$64 + 4$	68
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$2 \times 2 \times 2 \times 2$	16
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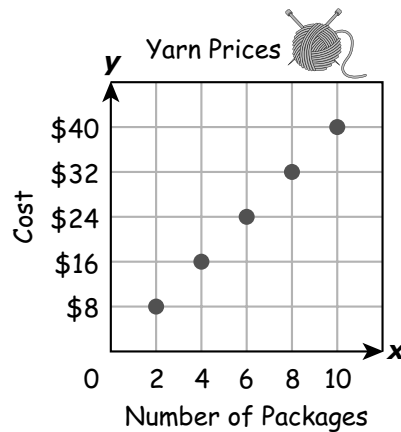
Scoring Instructions

Student Action	Test Administrator Action
If the student finds " $8 \times 2 \times 2 \times 2 \times 2 = 8 \times 2^4 = 128$ " in Stimulus 3b,	➡ mark A for question 3 and move to question 4.
If the student does not find " $8 \times 2 \times 2 \times 2 \times 2 = 8 \times 2^4 = 128$ " in Stimulus 3b,	<p style="text-align: center;">➡</p> <p>provide one of these allowable teacher assists to the student:</p> <ul style="list-style-type: none"> • Highlight the numbers in the "Process" column in Stimulus 3a. OR • Have the student describe the pattern in the table in Stimulus 3a. OR • Have the student use a calculator or math chart. <p>Replicate the initial presentation instructions.</p>
After the selected teacher assistance, if the student finds " $8 \times 2 \times 2 \times 2 \times 2 = 8 \times 2^4 = 128$ " in Stimulus 3b,	➡ mark B for question 3 and move to question 4.
After the selected teacher assistance, if the student does not find " $8 \times 2 \times 2 \times 2 \times 2 = 8 \times 2^4 = 128$ " in Stimulus 3b,	➡ mark C for question 3 and move to question 4.

Presentation Instructions for Question 4

- Present Stimulus 4a and 4b.
- Direct the student to Stimulus 4a. *Communicate:* **This dot plot shows the cost of different numbers of packages of yarn. Communicate the information in the dot plot. Communicate: Joey needs to buy five packages of yarn.**
- Direct the student to each answer choice in Stimulus 4b. *Communicate* the information in each answer choice.
- *Communicate:* **Find how much five packages of yarn cost.**

Stimulus 4a



Stimulus 4b

\$18
*
\$20
\$22

Scoring Instructions

Student Action	Test Administrator Action
If the student finds "\$20" in Stimulus 4b,	➡ mark A for question 4 and move to question 5.
If the student does not find "\$20" in Stimulus 4b,	➡ replicate the initial presentation instructions.
After the teacher repeats the instructions, if the student finds "\$20" in Stimulus 4b,	➡ mark B for question 4 and move to question 5.
After the teacher repeats the instructions, if the student does not find "\$20" in Stimulus 4b,	➡ mark C for question 4 and move to question 5.

Presentation Instructions for Question 5

- *Present* Stimulus 5.
- *Direct* the student to the equation on the top in Stimulus 5. *Communicate*: **Doug orders seven pepperoni pizzas for a family reunion. Each pizza is cut into eight slices. The total number of slices is represented by the variable s .**
- *Direct* the student to the equation on the bottom in Stimulus 5. *Communicate*: **The total number of slices of pizza is equal to 56.**
- *Communicate*: **Find the equation where the missing number is represented with the variable s .**

Stimulus 5

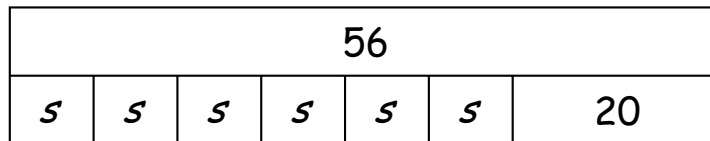
$*7 \times 8 = \underline{s}$
$7 \times 8 = \underline{56}$

Scoring Instructions		
Student Action		Test Administrator Action
If the student finds the equation with the variable,	➡	mark A for question 5 and move to question 6.
If the student does not find the equation with the variable,	➡	<ul style="list-style-type: none">• 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 equation with the variable,	➡	mark B for question 5 and move to question 6.
After the five-second wait time, if the student does not find the equation with the variable,	➡	mark C for question 5 and move to question 6.

Presentation Instructions for Question 6

- Present Stimulus 6a and 6b.
- Direct the student to Stimulus 6a. *Communicate*: This model shows the number of slices of pizza at the family reunion. There are 56 slices of pizza. The adults eat 20 slices of pizza. The remaining slices are divided equally onto six tables for the kids.
- Direct the student to each answer choice in Stimulus 6b. *Communicate* the information in each answer choice.
- *Communicate*: Find the equation that represents the model.

Stimulus 6a



Stimulus 6b

* $(56 - 20) \div 6 = \underline{\quad s \quad}$

$(56 + 20) \div 6 = \underline{\quad s \quad}$

Scoring Instructions

Student Action		Test Administrator Action
If the student finds “ $(56 - 20) \div 6 = s$ ” in Stimulus 6b,	➡	mark A for question 6 and move to question 7.
If the student does not find “ $(56 - 20) \div 6 = s$ ” in Stimulus 6b,	➡	<ul style="list-style-type: none"> model the desired student action by finding “$(56 - 20) \div 6 = s$” in Stimulus 6b and <i>communicate</i> “This equation represents the model”; and replicate the initial presentation instructions.
After teacher modeling, if the student finds “ $(56 - 20) \div 6 = s$ ” in Stimulus 6b,	➡	mark B for question 6 and move to question 7.
After teacher modeling, if the student does not find “ $(56 - 20) \div 6 = s$ ” in Stimulus 6b,	➡	mark C for question 6 and move to question 7.

Presentation Instructions for Question 7

- Present Stimulus 7a and 7b.
- Direct the student to Stimulus 7a. *Communicate*: There are seven pepperoni pizzas at the family reunion. Each pizza is cut into eight slices. There are six pieces of pepperoni on each slice of pizza.
- Direct the student to each answer choice in Stimulus 7b. *Communicate* the information in each answer choice.
- *Communicate*: Find the total number of pieces of pepperoni on all the pizzas.

Stimulus 7a

$$7 \times 8 \times 6 = n$$

Stimulus 7b

$$n = 62$$

$$n = 90$$

$$* n = 336$$

Scoring Instructions

Student Action		Test Administrator Action
If the student finds “ $n = 336$ ” in Stimulus 7b,	➡	mark A for question 7 and move to question 8.
If the student does not find “ $n = 336$ ” in Stimulus 7b,	➡	provide one of these allowable teacher assists to the student: <ul style="list-style-type: none"> • Highlight the operation signs in Stimulus 7a. OR • Have the student use manipulatives. OR • Have the student use a math chart. Replicate the initial presentation instructions.
After the selected teacher assistance, if the student finds “ $n = 336$ ” in Stimulus 7b,	➡	mark B for question 7 and move to question 8.
After the selected teacher assistance, if the student does not find “ $n = 336$ ” in Stimulus 7b,	➡	mark C for question 7 and move to question 8.

Presentation Instructions for Question 8

- Present Stimulus 8a and 8b.
- Direct the student to Stimulus 8a. *Communicate:* **This equation has a missing number represented by the letter p .**
- Direct the student to each part of the equation in Stimulus 8a. *Communicate:* **Twenty-five plus 10 minus a missing number equals 22.**
- Direct the student to each answer choice in Stimulus 8b. *Communicate* the information in each answer choice.
- *Communicate:* **Find the missing number represented by the letter p .**

Stimulus 8a

$$25 + 10 - p = 22$$

Stimulus 8b

35	20	* 13
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Scoring Instructions

Student Action		Test Administrator Action
If the student finds “13” in Stimulus 8b,	➡	mark A for question 8 and move to question 9.
If the student does not find “13” in Stimulus 8b,	➡	replicate the initial presentation instructions.
After the teacher repeats the instructions, if the student finds “13” in Stimulus 8b,	➡	mark B for question 8 and move to question 9.
After the teacher repeats the instructions, if the student does not find “13” in Stimulus 8b,	➡	mark C for question 8 and move to question 9.

Presentation Instructions for Question 9

- *Present* Stimulus 9. *Communicate*: The same value can be shown in different ways.
- *Direct* the student to Stimulus 9. *Communicate*: One thousand plus 100 plus 20 plus 5 is the same value as 1,125.
- *Communicate*: Find the two ways to show 1,125.

Stimulus 9

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$$1,000 + 100 + 20 + 5$$
$$1,125$$

Scoring Instructions		
Student Action		Test Administrator Action
If the student finds the two ways to show 1,125,	➡	mark A for question 9 and move to question 10.
If the student does not find the two ways to show 1,125,	➡	<ul style="list-style-type: none">• 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 two ways to show 1,125,	➡	mark B for question 9 and move to question 10.
After the five-second wait time, if the student does not find the two ways to show 1,125,	➡	mark C for question 9 and move to question 10.

Presentation Instructions for Question 10

- Present Stimulus 10a and 10b.
- Direct the student to Stimulus 10a. *Communicate*: This equation shows the standard form and expanded form of a number: 1,125 equals 1,000 plus 100 plus 20 plus 5.
- Direct the student to each answer choice in Stimulus 10b. *Communicate* the information in each answer choice.
- *Communicate*: Find the standard form and expanded form of a number.

Stimulus 10a

$$1,125 = 1,000 + 100 + 20 + 5$$

Stimulus 10b

* 3,365 = 3,000 + 300 + 60 + 5

2,000 + 100 + 50 + 5 = 2,000 + 100 + 50 + 5

Scoring Instructions		
Student Action		Test Administrator Action
If the student finds “3,365 = 3,000 + 300 + 60 + 5” in Stimulus 10b,	➡	mark A for question 10 and move to question 11.
If the student does not find “3,365 = 3,000 + 300 + 60 + 5” in Stimulus 10b,	➡	<ul style="list-style-type: none"> • model the desired student action by finding “3,365 = 3,000 + 300 + 60 + 5” in Stimulus 10b and <i>communicate</i> “This is the standard form and expanded form of a number”; and • replicate the initial presentation instructions.
After teacher modeling, if the student finds “3,365 = 3,000 + 300 + 60 + 5” in Stimulus 10b,	➡	mark B for question 10 and move to question 11.
After teacher modeling, if the student does not find “3,365 = 3,000 + 300 + 60 + 5” in Stimulus 10b,	➡	mark C for question 10 and move to question 11.

Presentation Instructions for Question 11

- *Present* Stimulus 11a and 11b.
- *Direct* the student to the equation on the top in Stimulus 11a. *Communicate*: **Six squared can be found by multiplying six times six.**
- *Direct* the student to the equation on the bottom in Stimulus 11a. *Communicate*: **This is the equation six squared plus two equals a missing number.**
- *Direct* the student to each answer choice in Stimulus 11b. *Communicate* the information in each answer choice.
- *Communicate*: **Find the missing number.**

Stimulus 11a

$$6^2 = 6 \times 6$$

$$6^2 + 2 = \square$$

Stimulus 11b

* 38

14

24

Scoring Instructions	
Student Action	Test Administrator Action
If the student finds “38” in Stimulus 11b,	➔ mark A for question 11 and move to question 12.
If the student does not find “38” in Stimulus 11b,	➔ provide one of these allowable teacher assists to the student: <ul style="list-style-type: none"> • Have the student use a calculator or math chart. OR • Highlight the addition sign in Stimulus 11a. Replicate the initial presentation instructions.
After the selected teacher assistance, if the student finds “38” in Stimulus 11b,	➔ mark B for question 11 and move to question 12.
After the selected teacher assistance, if the student does not find “38” in Stimulus 11b,	➔ mark C for question 11 and move to question 12.

Presentation Instructions for Question 12

- *Present* Stimulus 12a and 12b.
- *Direct* the student to Stimulus 12a. *Communicate*: **This is the expression five squared minus the product of four times three.**
- *Direct* the student to each answer choice in Stimulus 12b. *Communicate* the information in each answer choice.
- *Communicate*: **Find the value of the expression.**

Stimulus 12a

$$5^2 - (4 \times 3)$$

Stimulus 12b

37

* 13

2

Scoring Instructions

Student Action		Test Administrator Action
If the student finds "13" in Stimulus 12b,	➡	mark A for question 12 and move to question 13.
If the student does not find "13" in Stimulus 12b,	➡	replicate the initial presentation instructions.
After the teacher repeats the instructions, if the student finds "13" in Stimulus 12b,	➡	mark B for question 12 and move to question 13.
After the teacher repeats the instructions, if the student does not find "13" in Stimulus 12b,	➡	mark C for question 12 and move to question 13.

Presentation Instructions for Question 13

- Present Stimulus 13.
- Direct the student to Stimulus 13. *Communicate:* **This table shows the number of pieces of chocolate candy in one, two, and three boxes.** *Communicate* the information in the table.
- *Communicate:* **Find the table that shows the number of pieces of chocolate candy in one, two, and three boxes.**

Stimulus 13

Chocolate Candy

*

Number of Boxes	1	2	3
Pieces of Chocolate Candy	6	12	18

Scoring Instructions		
Student Action		Test Administrator Action
If the student finds the table,	➡	mark A for question 13 and move to question 14.
If the student does not find the table,	➡	<ul style="list-style-type: none"> • 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 table,	➡	mark B for question 13 and move to question 14.
After the five-second wait time, if the student does not find the table,	➡	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*: This table shows that each box contains six pieces of chocolate candy. *Communicate* the information in the table.
- Direct the student to each answer choice in Stimulus 14b. *Communicate* the information in each answer choice.
- *Communicate*: Find the relationship between the number of boxes and the total number of pieces of chocolate candy.

Stimulus 14a

Chocolate Candy

Number of Boxes	1	2	3
Pieces of Chocolate Candy	6	12	18

Stimulus 14b

$$+ 5$$

$$* \times 6$$

Scoring Instructions

Student Action		Test Administrator Action
If the student finds “ $\times 6$ ” in Stimulus 14b,	➡	mark A for question 14 and move to question 15.
If the student does not find “ $\times 6$ ” in Stimulus 14b,	➡	<ul style="list-style-type: none"> • model the desired student action by finding “$\times 6$” in Stimulus 14b and <i>communicate</i> “This is the relationship between the number of boxes and the total number of pieces of chocolate candy”; and • replicate the initial presentation instructions.
After teacher modeling, if the student finds “ $\times 6$ ” in Stimulus 14b,	➡	mark B for question 14 and move to question 15.
After teacher modeling, if the student does not find “ $\times 6$ ” in Stimulus 14b,	➡	mark C for question 14 and move to question 15.

Presentation Instructions for Question 15

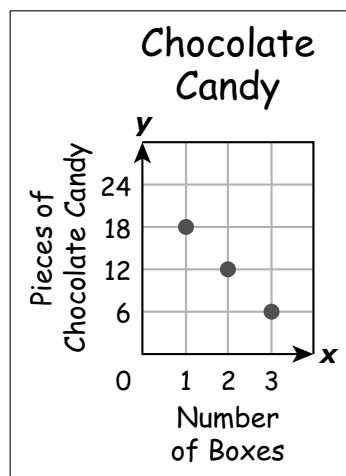
- Present Stimulus 15a and 15b.
- Direct the student to Stimulus 15a. *Communicate:* This table shows that each box contains six pieces of chocolate candy. *Communicate* the information in the table.
- Direct the student to each answer choice in Stimulus 15b. *Communicate:* These are three graphs. The x-axis shows the number of boxes, and the y-axis shows the number of pieces of chocolate candy. *Communicate* the information in each graph.
- *Communicate:* Find the graph that shows that each box contains six pieces of chocolate candy.

Stimulus 15a

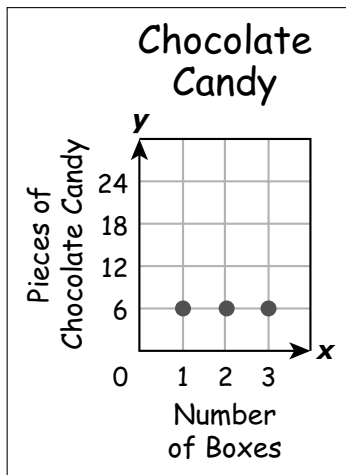
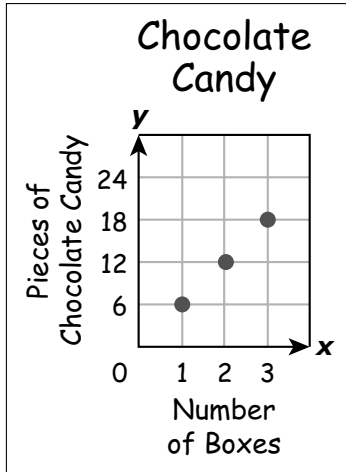
Chocolate Candy

Number of Boxes	1	2	3
Pieces of Chocolate Candy	6	12	18

Stimulus 15b



*



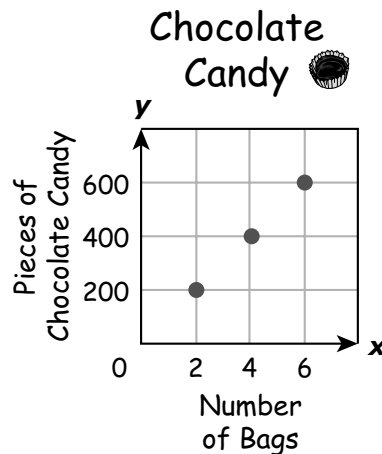
Scoring Instructions

Student Action	Test Administrator Action
If the student finds the graph with points labeled at (1, 6), (2, 12), and (3, 18) in Stimulus 15b,	➡ mark A for question 15 and move to question 16.
If the student does not find the graph with points labeled at (1, 6), (2, 12), and (3, 18) in Stimulus 15b,	➡ provide one of these allowable teacher assists to the student: <ul style="list-style-type: none"> • Highlight the numbers in the “Pieces of Chocolate Candy” row of the table in Stimulus 15a. OR • Highlight the numbers on the y-axis of each graph in Stimulus 15b. OR • Have the student tell the number of pieces of chocolate candy in one box, two boxes, and three boxes in each graph. Replicate the initial presentation instructions.
After the selected teacher assistance, if the student finds the graph with points labeled at (1, 6), (2, 12), and (3, 18) in Stimulus 15b,	➡ mark B for question 15 and move to question 16.
After the selected teacher assistance, if the student does not find the graph with points labeled at (1, 6), (2, 12), and (3, 18) 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. *Communicate*: This graph shows a linear relationship between the number of bags of chocolate candy and the number of pieces of chocolate candy in the bags. Each bag has the same number of pieces in it. *Communicate* the information in the graph.
- Direct the student to each answer choice in Stimulus 16b. *Communicate* the text in each answer choice.
- *Communicate*: Find the sentence that describes the data in the graph.

Stimulus 16a



Stimulus 16b

* There are 500 pieces of chocolate candy in 5 bags.

There are 100 pieces of chocolate candy in 2 bags.

There are 600 pieces of chocolate candy in 3 bags.

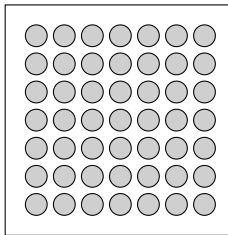
Scoring Instructions

Student Action	Test Administrator Action
If the student finds “There are 500 pieces of chocolate candy in 5 bags” in Stimulus 16b,	➡ mark A for question 16 and move to question 17.
If the student does not find “There are 500 pieces of chocolate candy in 5 bags” in Stimulus 16b,	➡ replicate the initial presentation instructions.
After the teacher repeats the instructions, if the student finds “There are 500 pieces of chocolate candy in 5 bags” in Stimulus 16b,	➡ mark B for question 16 and move to question 17.
After the teacher repeats the instructions, if the student does not find “There are 500 pieces of chocolate candy in 5 bags” in Stimulus 16b,	➡ mark C for question 16 and move to question 17.

Presentation Instructions for Question 17

- *Present* Stimulus 17.
- *Direct* the student to the circles in Stimulus 17. *Communicate*: **This array shows seven circles in each row and seven circles in each column.**
- *Direct* the student to the equations in Stimulus 17. *Communicate*: **This is an equation. Seven times 7 equals 49. Both factors are seven. Another way to write seven times seven is seven squared. Seven squared equals 49.**
- *Communicate*: **Find the equations that represent seven squared equals 49.**

Stimulus 17



*

$$7 \times 7 = 49$$

$$7^2 = 49$$

Scoring Instructions		
Student Action		Test Administrator Action
If the student finds the equations,	➡	mark A for question 17 and move to question 18.
If the student does not find the equations,	➡	<ul style="list-style-type: none"> • 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 equations,	➡	mark B for question 17 and move to question 18.
After the five-second wait time, if the student does not find the equations,	➡	mark C for question 17 and move to question 18.

Presentation Instructions for Question 18

- Present Stimulus 18a and 18b.
- Direct the student to Stimulus 18a. *Communicate*: **Seven times seven equals 49. Both factors are seven. Another way to write seven times seven is seven squared. Seven squared equals 49.**
- Direct the student to each answer choice in Stimulus 18b. *Communicate* the information in each answer choice.
- *Communicate*: **Find the equation with a factor that is squared.**

Stimulus 18a

$$7 \times 7 = 49$$

$$7^2 = 49$$

Stimulus 18b

* $8^2 = 64$

$9 + 9 = 18$

Scoring Instructions

Student Action		Test Administrator Action
If the student finds “ $8^2 = 64$ ” in Stimulus 18b,	➡	mark A for question 18 and move to question 19.
If the student does not find “ $8^2 = 64$ ” in Stimulus 18b,	➡	<ul style="list-style-type: none"> • model the desired student action by finding “$8^2 = 64$” in Stimulus 18b and <i>communicate</i> “This is the equation with a factor that is squared”; and • replicate the initial presentation instructions.
After teacher modeling, if the student finds “ $8^2 = 64$ ” in Stimulus 18b,	➡	mark B for question 18 and move to question 19.
After teacher modeling, if the student does not find “ $8^2 = 64$ ” in Stimulus 18b,	➡	mark C for question 18 and move to question 19.

Presentation Instructions for Question 19

- *Present* Stimulus 19.
- *Direct* the student to each answer choice in Stimulus 19. *Communicate*: **These tables show factors, the processes used to get the solutions, and the solutions.** *Communicate* the information in each table.
- *Communicate*: **Find the table that shows factors that are squared.**

Stimulus 19

Factor	Process	Solution
4	4×2	8
5	5×2	10
6	6×2	12

Factor	Process	Solution
4	$4 + 2$	6
5	$5 + 2$	7
6	$6 + 2$	8

* Factor	Process	Solution
4	4^2	16
5	5^2	25
6	6^2	36

Scoring Instructions

Student Action	Test Administrator Action
If the student finds the table with 16, 25, and 36 in the “Solution” column,	➡ mark A for question 19 and move to question 20.
If the student does not find the table with 16, 25, and 36 in the “Solution” column,	➡ provide one of these allowable teacher assists to the student: <ul style="list-style-type: none"> • Highlight the middle column of each table. OR • Have the student use a calculator or math chart. OR • Have the student tell what “squared” means. Replicate the initial presentation instructions.
After the selected teacher assistance, if the student finds the table with 16, 25, and 36 in the “Solution” column,	➡ mark B for question 19 and move to question 20.
After the selected teacher assistance, if the student does not find the table with 16, 25, and 36 in the “Solution” column,	➡ mark C for question 19 and move to question 20.

Presentation Instructions for Question 20

- Present Stimulus 20a and 20b.
- Direct the student to Stimulus 20a. *Communicate*: This table shows factors, x , and solutions, y . *Communicate* the information in the table.
- Direct the student to each answer choice in Stimulus 20b. *Communicate* the information in each answer choice.
- *Communicate*: Find the equation that represents the relationship between the factors and the solutions in the table.

Stimulus 20a

Factor (x)	Solution (y)
2	5
3	10
4	17
5	26

Stimulus 20b

$$2x - 1 = y$$

$$x^2 = y$$

$$* x^2 + 1 = y$$

Scoring Instructions

Student Action		Test Administrator Action
If the student finds " $x^2 + 1 = y$ " in Stimulus 20b,	➡	mark A for question 20.
If the student does not find " $x^2 + 1 = y$ " in Stimulus 20b,	➡	replicate the initial presentation instructions.
After the teacher repeats the instructions, if the student finds " $x^2 + 1 = y$ " in Stimulus 20b,	➡	mark B for question 20.
After the teacher repeats the instructions, if the student does not find " $x^2 + 1 = y$ " in Stimulus 20b,	➡	mark C for question 20.

**TEST
INSTRUCTIONS**

**STAAR ALTERNATE 2
Algebra I
April 2023**

