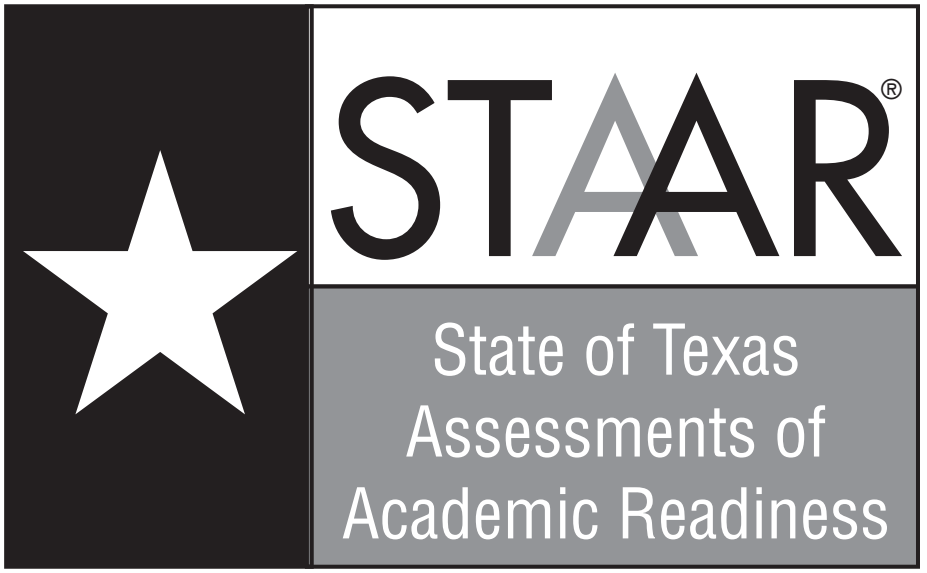

Algebra I

Administered May 2022

RELEASED

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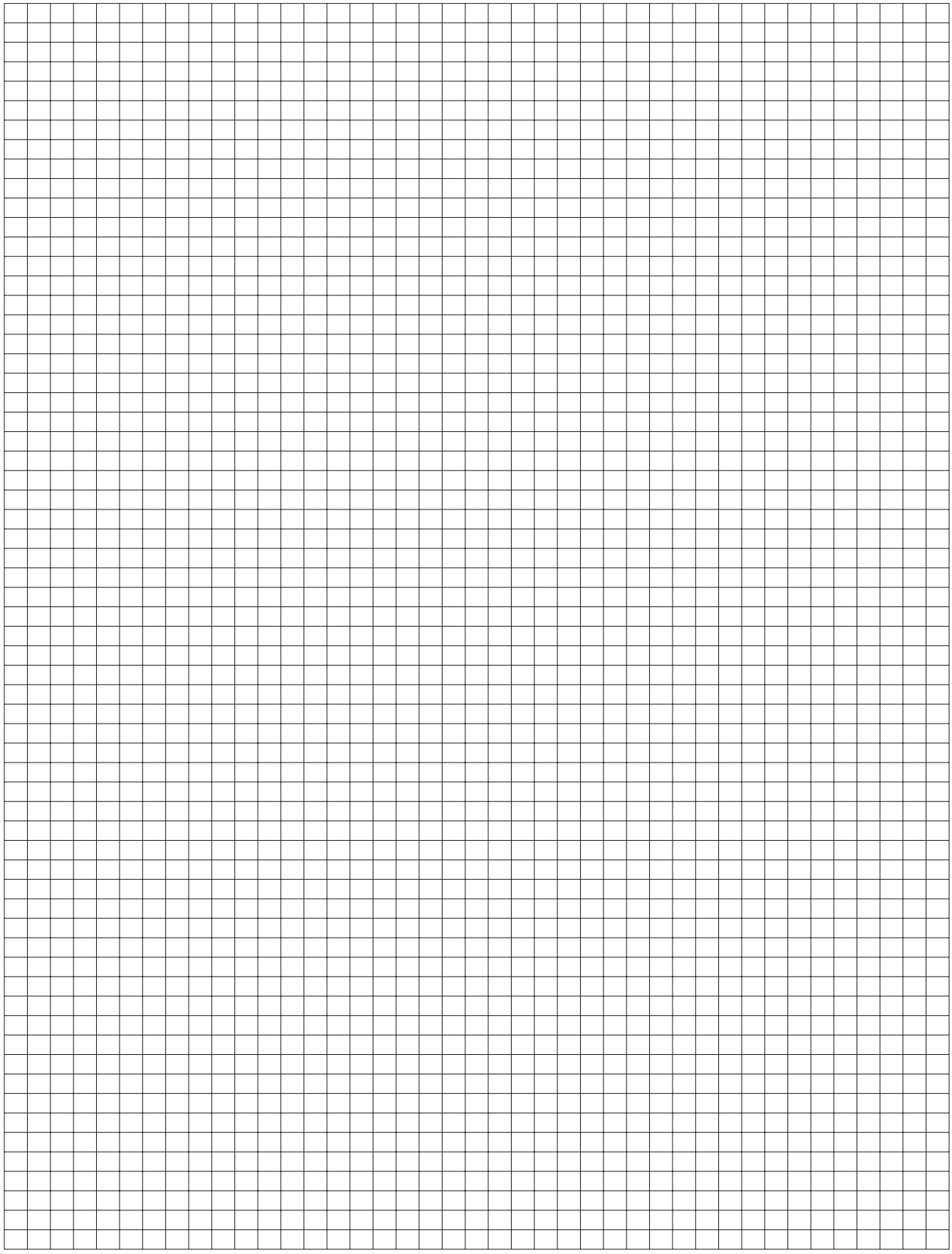


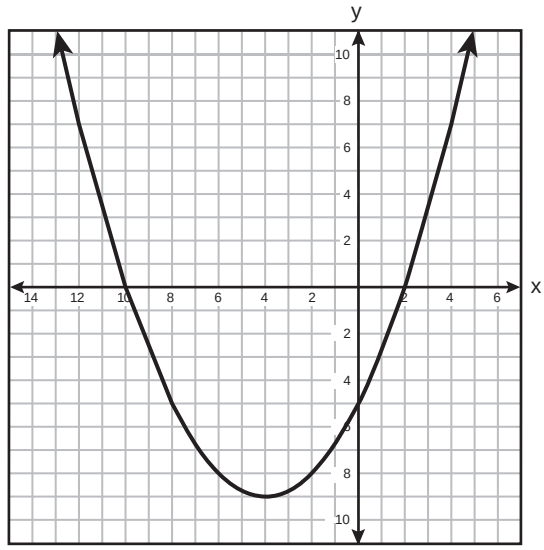
ALGEBRA I

GO ON

DIRECTIONS

Read each question carefully. For a multiple-choice question, determine the best answer to the question from the four answer choices provided. For a griddable question, determine the best answer to the question. Then, fill in the answer on the answer document.

1 The graph of quadratic function r is shown on the grid.



Which answer choice best represents the intercepts of the graph of r?

A x-intercept: (5, 0)
y-intercepts: (0, 10) and (0, í2)

B x-intercepts: (0, í10) and (0, 2)
y-intercept: (í5, 0)

C x-intercept: (0, 5)
y-intercepts: (10, 0) and (í2, 0)

D x-intercepts: (í10, 0) and (2, 0)
y-intercept: (0, í5)

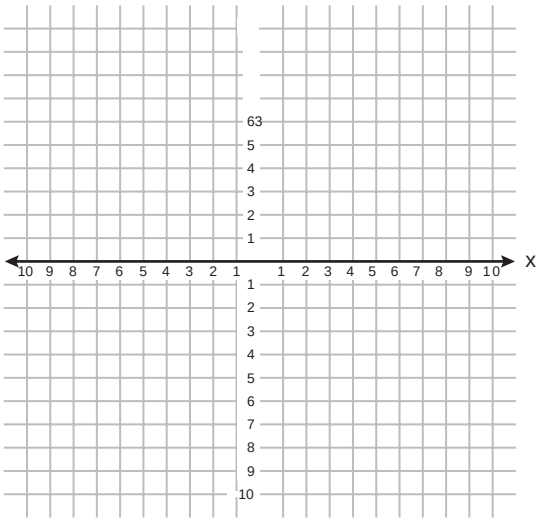
GO ON

2 A worker is packing items in boxes. The table shows the linear relationship between the number of items the worker has packed in boxes after different amounts of time.

Items Packed in Boxes

GO ON

3 A system of equations is graphed on the grid.



GO ON

5 What is the solution to this system of equations?

$$2x + y = 40$$
$$x \text{ í } y \text{ í}$$

A (12, 16)

B (15, 17.5)

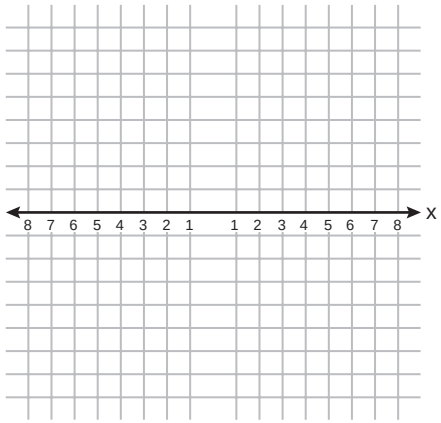
C There is no solution.

D 7KHUH DUH DQ LQ¿QLWH QXPEHU RI VROXWLRQV

GO ON

6 Which graph best represents a quadratic function with a range of all real numbers greater than or equal to 3?

F

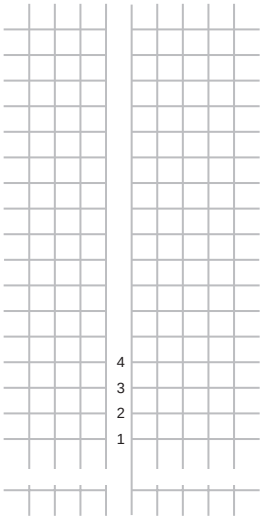


GO ON

GO O

GO ON

9 An exponential function is graphed on the grid.



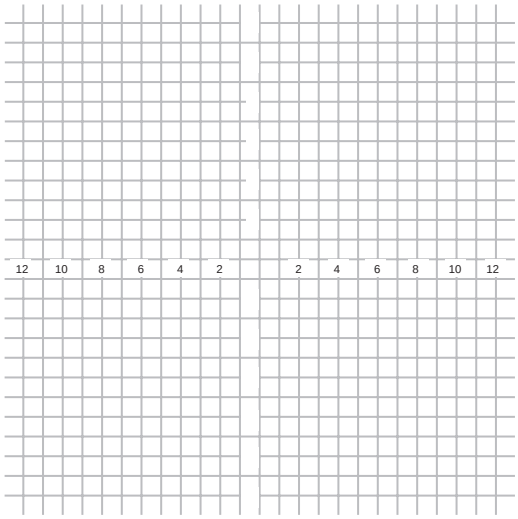
GO ON

12 A system of linear equations is represented by line h and line j. A table representing some points on line h and the graph of line j are shown.

Line h

GO ON

15 The graph of a linear function is shown on the grid.



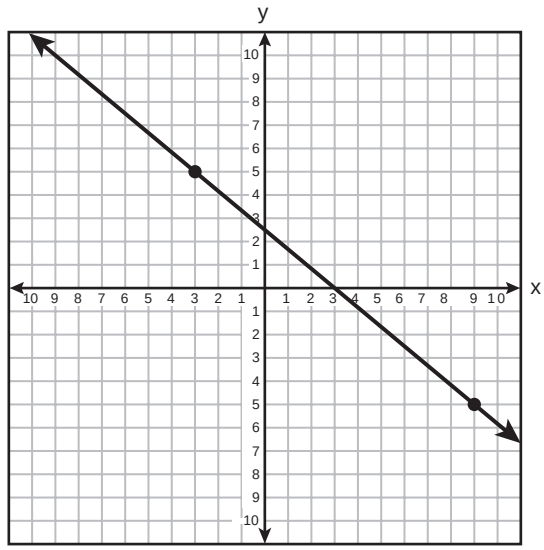
GO ON

GO O

18

GO ON

19 The graph of a line is shown on the grid. The coordinates of both points indicated on the graph of the line are integers.



What is the rate of change of y with respect to x for this line?

A $\frac{5}{2}$

B $-\frac{6}{5}$

C $\frac{2}{3}$

D $-\frac{5}{6}$

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20 What is the value of the y-intercept of the graph of $h(x) = 12.3(4.9)^x$?

5HFRUG \RXU DQVZHU DQG ¿OO LQ WKH EXEEOHV RQ \R

23 Which expression is equivalent to (5 rt í rw í tw) + (6rt í rw + 2tw)?

A 11 rt + rw í tw

B 11 rt í rw í tw

C 11 rt + rw í tw

D 11 rt í rw í tw

GO ON