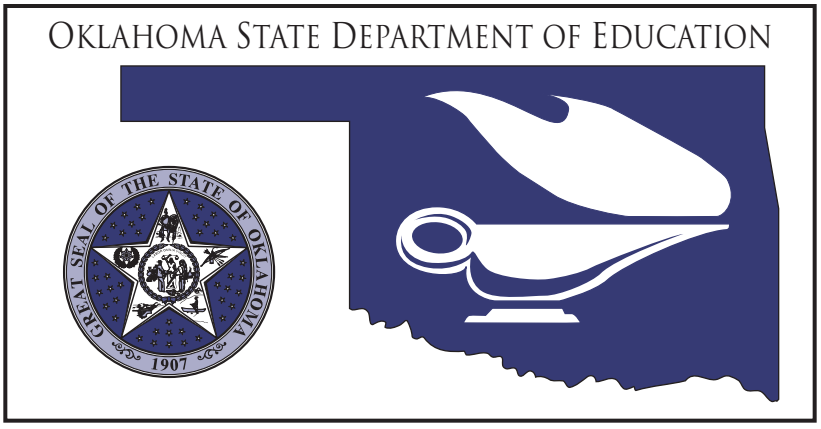
Oklahoma School Testing Program



Oklahoma Core Curriculum Tests

2008–2009 Released Items

End-of-Instruction
ACE Algebra I

Oklahoma State Department of Education
Oklahoma City, Oklahoma

Section 1

Section 1

Directions

Read each question and choose the best answer.

1 **A functional relationship is shown in this table.**

x	0	1	2	3
$f(x)$	-1	1	3	?

What is the value of the function when x is 3?

A 3

B 4

C 5

D 6

2

$$(3x - 5)(2y + 4)$$

What is the value of this expression when $x = -2$ and $y = -3$?

F 0

G 15

H 22

J 28

GO ON ▶

3 **What happens to the graph of the equation $y = 2x + 3$ when the equation is changed to $y = {}^{-}\frac{1}{2}x + 3$?**

A The graph does not change.

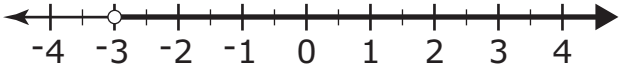
B The original line shifts up $2\frac{1}{2}$ units.

C The original line shifts down $2\frac{1}{2}$ units.

D The new line is perpendicular to the original line.

4 **Which number line shows the correct solution to the inequality $^{-}2x < 6$?**

F



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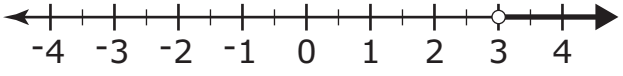

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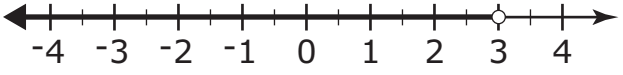

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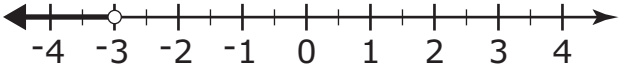


Section 1

5 **The table shows a relationship between *x* and *y*.**

x	*y*
0	3
2	-1
3	-3
4	-5

Which equation represents this relationship?

A $y = 3x$

B $y = 2x + 3$

C $y = 3x - 1$

D $y = {}^{-}2x + 3$

6 **An ice cream cone has a height of 7 inches. The radius of the open end of the cone is 2 inches. Approximately how much melted ice cream can fit in the cone?**

F 14 cubic inches

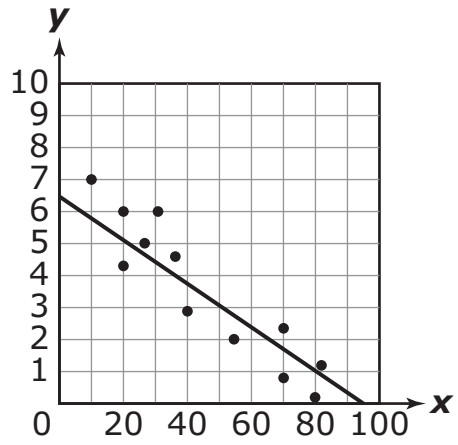
G 29 cubic inches

H 56 cubic inches

J 98 cubic inches

$$V = \frac{1}{3}\pi r^2 h$$

7 **A line of best fit has been drawn on this scatter plot.**



Which equation represents the line of best fit for this scatter plot?

A $y = \frac{3}{20}x + 7$

B $y = \frac{2}{20}x - \frac{13}{2}$

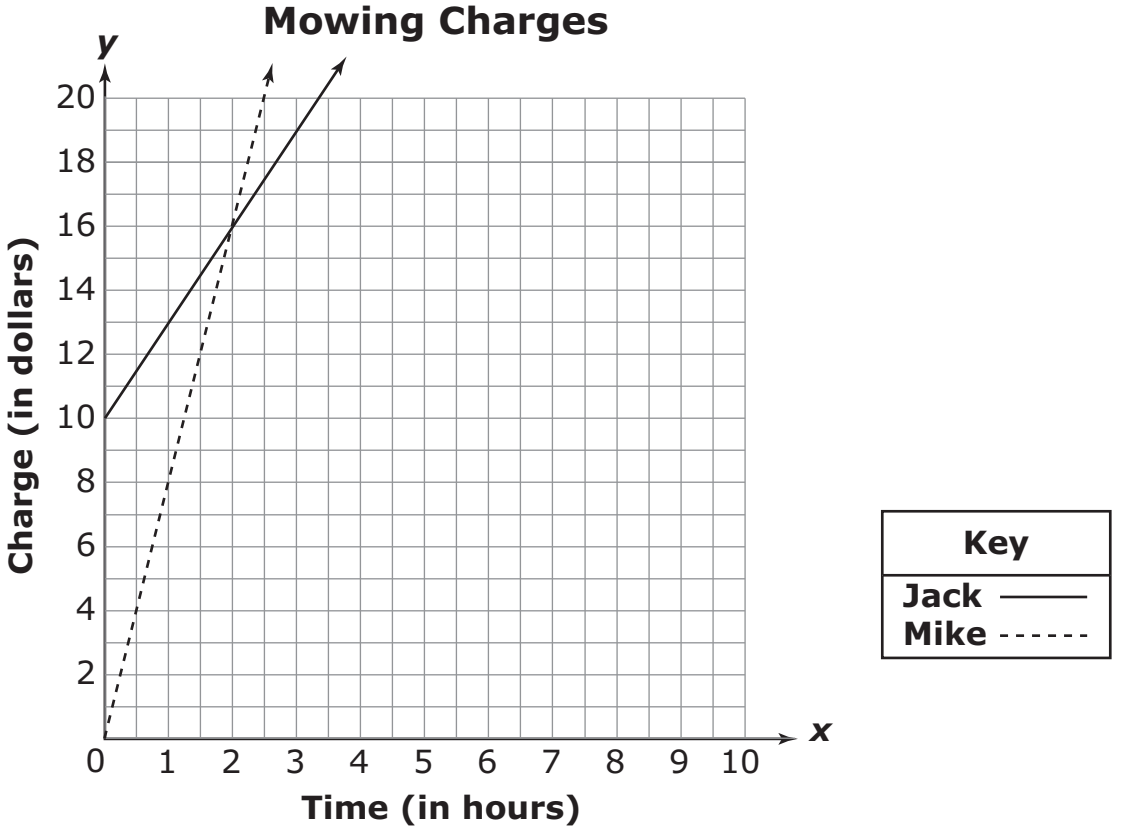
C $y = \frac{-2}{30}x + \frac{13}{2}$

D $y = \frac{-2}{30}x - 7$

Section 1

Use the information below to answer Numbers 8 and 9.

Jack and Mike mow lawns. Jack charges $3 per hour plus a $10 equipment fee. Mike charges $8 per hour, but does not charge an equipment fee. Their charges are shown on the graph.



8 **What is the slope of the line representing how much Mike charges?**

F $\frac{1}{8}$

G $\frac{1}{3}$

H 3

J 8

9 **Sarah also mows lawns. She charges a $4 equipment fee. If the total amount that Sarah charges for mowing lawns were graphed on the graph shown, it would be parallel to the line that represents the amount that Jack charges. Which equation represents the amount that Sarah charges?**

A $y = 3x + 4$

B $y = 3x + 10$

C $y = 8x + 4$

D $y = 8x + 10$

Section 1

10 **What is the slope of the line represented by the equation $4x + y = -2$?**

F -4

G -2

H 2

J 4

11 **If $2x + 4 = 16$, what is the value of y when $y = 3x - 7$?**

A 5

B 11

C 17

D 23

12

$$-\sqrt{16} + 16 - \left(\sqrt{25} + \sqrt{81}\right)$$

What is the simplified form of this expression?

F -14

G -2

H 2

J 12

13 **The table shows the number of calories John burns while riding his bicycle.**

Calories Burned by Bicycle Riding

Speed (x) (in miles per hour)	10	12	14	17
Calories Burned Per Hour (y)	408	544	680	952

John determined that the line of best fit for this data is $y = 68x - 272$. If his speed is a constant 16 miles per hour, how many calories can he expect to burn when he rides his bicycle for 5 hours?

A 680 calories

B 816 calories

C 3,400 calories

D 4,080 calories

Section 1

Use the information below to answer Numbers 14 and 15.

Tamika would like to go fishing at one of the two catfish farms close to her home. Floyd's Catfish Farm charges a $5 fee to fish plus $2 per pound of fish caught. The Miller's Catfish Farm does not charge a fee to fish, but charges $3 per pound of fish caught.

14 **Which pair of equations represents the cost (c) of catching x pounds of fish at each of the catfish farms?**

F $c = 5x + 2$
$c = 3x$

G $c = 2x + 5$
$c = 3 + x$

H $c = 5x + 2$
$c = 3 + x$

J $c = 2x + 5$
$c = 3x$

15 **The graphs of the cost equations for the two catfish farms intersect. What information does the point of intersection represent?**

A The number of pounds of fish caught at both catfish farms for the same price.

B The number of pounds of fish caught at each catfish farm for the day.

C The amount of money saved by going to Miller's Catfish Farm.

D The cost for one pound of fish caught at each catfish farm.

GO ON ▶

16 **Which equation represents the line that contains (1, $^{-}4$) and has a slope of $^{-}2$?**

F $y = {}^{-}2x - 2$

G $y = {}^{-}2x - 4$

H $y = {}^{-}2x - 6$

J $y = {}^{-}2x - 8$

Section 1

17 **Which equation represents the statement "two more than four times a number is 15"?**

A $2a + 4 = 15$

B $2(a + 4) = 15$

C $4a + 2 = 15$

D $4(a + 2) = 15$

18

x	*y*
2	5
6	10
14	20

What is the slope of the line that passes through the ordered pairs shown in the table?

F $\frac{8}{15}$

G $\frac{4}{5}$

H $\frac{5}{4}$

J $\frac{15}{8}$

19

$$14 - 2(x + 3) \leq 3x + 4$$

Which is the solution to this inequality?

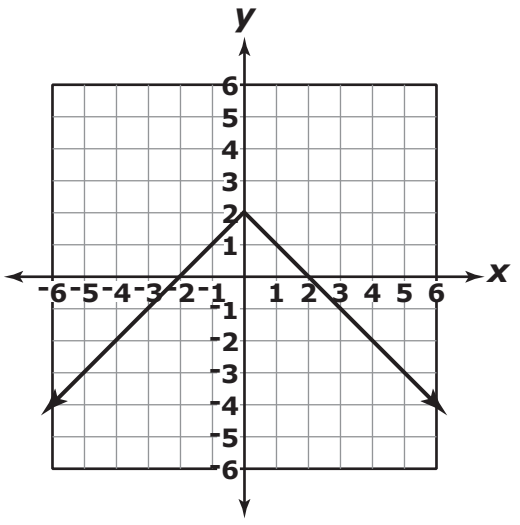
A $x \geq \frac{-4}{5}$

B $x \leq \frac{-4}{5}$

C $x \geq \frac{4}{5}$

D $x \leq \frac{4}{5}$

20 **The graph of an equation is shown.**



Which equation is represented by the graph?

F $y = |x + 2|$

G $y = |x| + 2$

H $y = -|x| + 2$

J $y = -|x + 2|$

21

$$6(3 - a) > 4a + 2$$

What is the solution to this inequality?

A $a < \frac{-8}{5}$

B $a > \frac{-8}{5}$

C $a < \frac{8}{5}$

D $a > \frac{8}{5}$

22 **Joan graphed the lines $y = 4x + 2$ and $y = 2x - 6$. What is the y-value of the solution to this system of equations?**

F -14

G -6

H 2

J 18

STOP

END OF SECTION 1


PEARSON