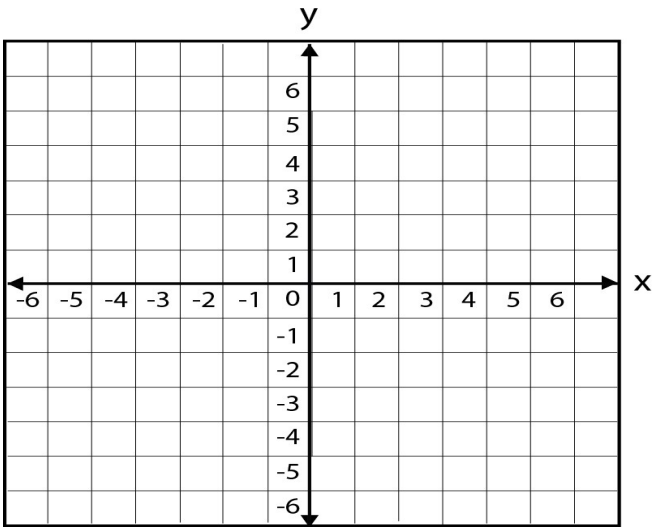
UNIT 2 REVIEW

GO ON

1 The family of linear functions is essential to many aspects of our daily lives inside and outside of the math classroom. All linear functions are a variation of the parent function.

A. Write the equation for the parent function for all linear functions.

B. In the grid below, draw a graph of the parent function for all linear functions.



C. State the domain and range of the parent function for all linear functions.

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2 What is the slope from the following table of values?

x	y
1	5
0	3
−1	1

F $-\frac{1}{2}$

G 2

H $\frac{1}{2}$

J -2

3 What is the slope of the line that passes through the points M (-3,5) and N (1,8)?

A $\frac{3}{4}$

B $-\frac{4}{3}$

C $-\frac{3}{4}$

D $\frac{4}{3}$

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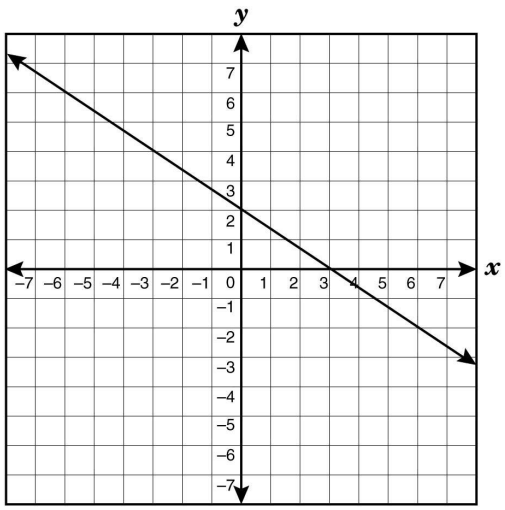
4



Which expression below best describes the graph above?

F A line with a y -intercept of 2 and a slope of $\frac{2}{3}$.

G A line with a y -intercept of 3 and a slope of $-\frac{2}{3}$.

H A line with a y -intercept of 2 and a slope of $-\frac{2}{3}$.

J A line with an x -intercept of 3 and a slope of $-\frac{3}{2}$.

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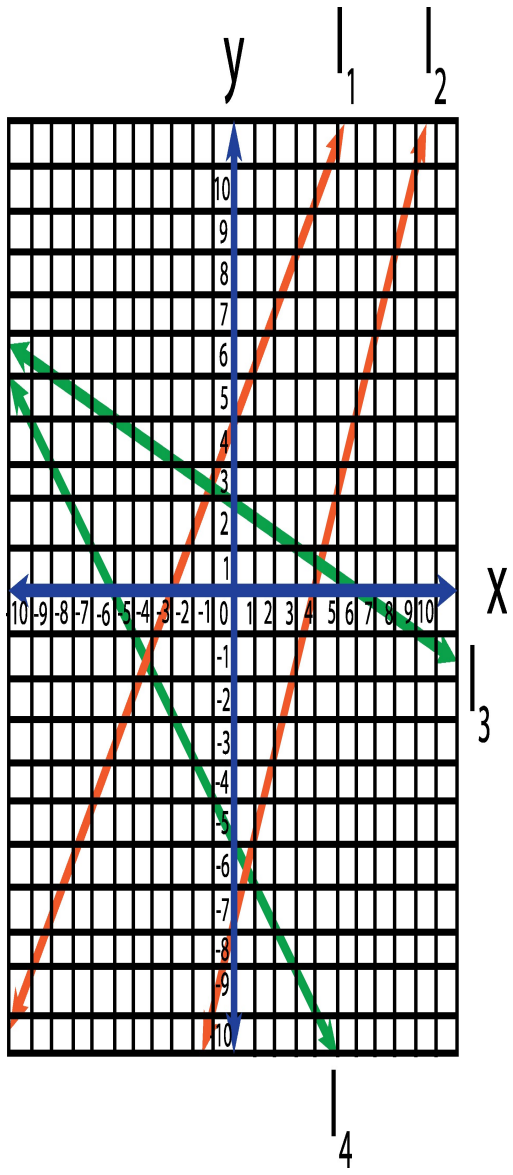
5 Four linear functions are shown on the coordinate plane below.



A. Determine the slope of each line. Be sure to show your work.

B. According to your response in part A, which of the four lines has the steepest slope? Justify your answer.

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6 Given that a line passes through (0, 6) and has a slope of $\frac{1}{2}$, write its equation.

F $f(x) = \frac{1}{2}x + 6$

G $y = \frac{1}{2}x + 6$

H $x = \frac{1}{2}y + 6$

J $y = \frac{1}{2}x + 0$

7 Find the equation of the line that has a slope of $-\frac{3}{4}$ and a y-intercept of 1.

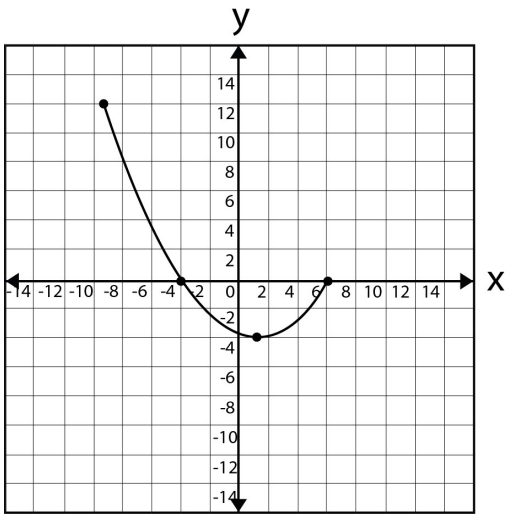
A $3x + 4y = 4$

B $4x + 3y = 4$

C $\frac{3}{4}x - y = 1$

D $\frac{4}{3}x + y = 4$

8 This curve has endpoints at (–9, 12) and (6, 0). The points (–4, 0) and (1, –4) are also located on the curve.



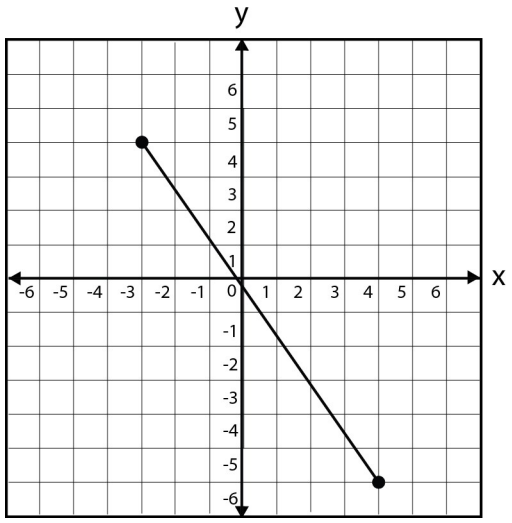
A. What is the domain of the graph?

B. What is the range of the graph?

9 What is the range of the function $f(x) = 4x - 6$ when the domain is {–3, –1, 1, 3, 5}?

GO ON

10 What is the domain of this graph?



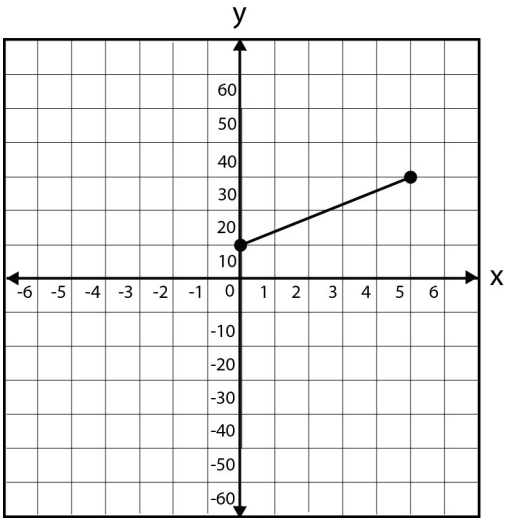
F $\{x \mid -3 \le x \le 4\}$

G $\{x \mid -6 \le x \le 4\}$

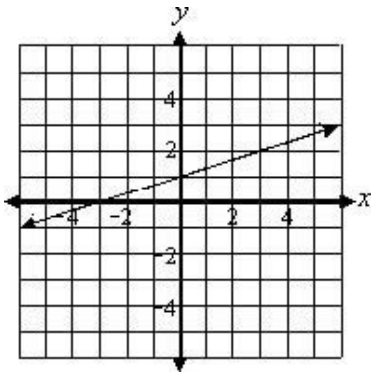
H $\{x \mid \frac{-3}{4} \le x \le \frac{2}{-3}\}$

J $\{x \mid -6 \le x \le -3\}$

11 What is the domain of the line segment on the graph below?



12 A linear function is graphed below.



What is the equation of this line when it is translated 4 units down?

F $y = \frac{1}{3}x - 3$

G $y = 3x-3$

H $y = \frac{1}{3}x + 1$

J $y = 3x+1$

13 Given $y = \frac{1}{2}x + 3$ the zero of $f(x)$ is what?

A $\frac{-3}{2}$

B 3

C -6

D -3

GO ON

14 Given f(x) =1/2x-2 which of the following is true of f(x)?

I. The y-intercept is -2.
II The x-intercept is 4.

III.The slope is $\frac{1}{2}$

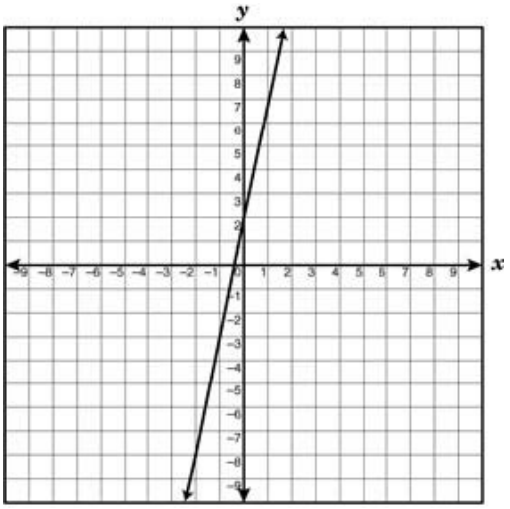
F I only

G I and II only

H I, II and III

J None of the above

15 The graph of the function $y = 5x + 2$ is shown below.



Which of these following represents the line translated 3 units down?

A $y = 2x - 3$

B $y = 2x + 2$

C $y = 5x - 3$

D $y = 5x - 1$

16 A function is represented by the set of ordered pairs shown below.

{(-4, 3), (-1, 3), (0, 3), (1, 5), (3, 7)}
What is the range of this function?

F {7}

G {4}

H {3, 5, 7}

J {−4, −1, 0, 1, 3}

17 The table below lists corresponding x and y values of a linear function.

x	***y***
−3	−11
−1	− 3
0	1
2	9
3	13
5	21

Which equation below best represents this function?

A $y = x - 4$

B $y = 4x - 1$

C $y = x + 4$

D $y = 4x + 1$

BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS ON YOUR ANSWER DOCUMENT

STOP