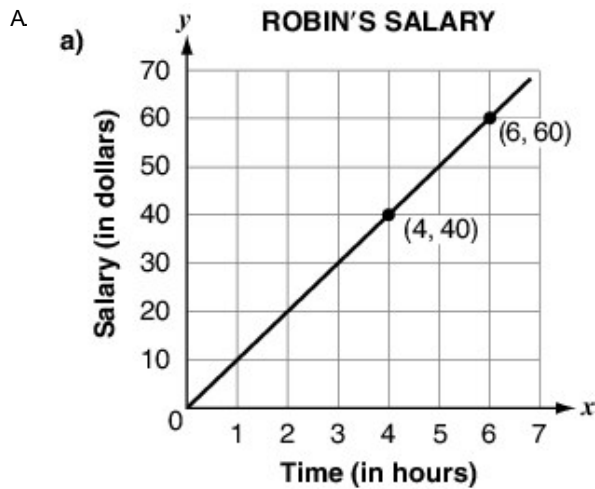TEST NAME: **8.EE.5,6,7,8 Review**
TEST ID: **947598**
GRADE: **08 - Eighth Grade**
SUBJECT: **Mathematics**
TEST CATEGORY: **Shared Classroom Assessments**

Student: _____

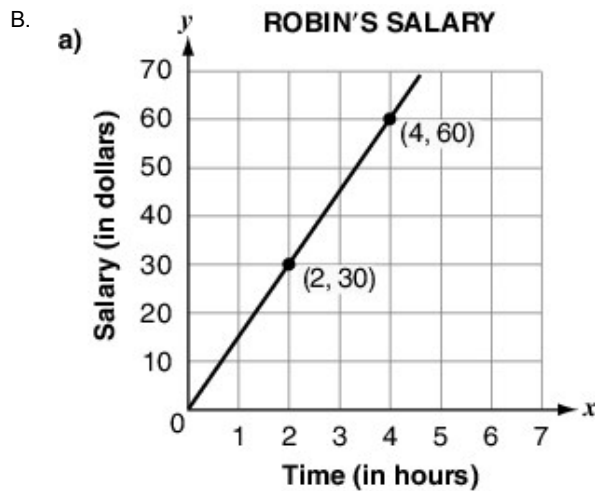Class: _____

Date: _____

1. Robin works 5 hours a day, and Dave works 6 hours a day. Their hourly salaries are such that Robin's earnings in 3 days are the same as Dave's earnings in 5 days. Which graph and equation **could** represent Robin's and Dave's salaries after t hours?
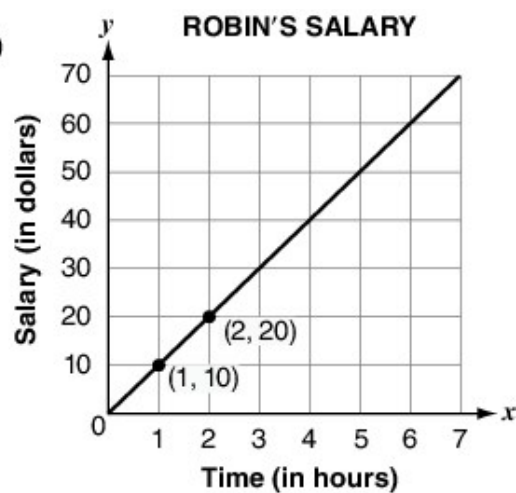
A.
a)

ROBIN'S SALARY

(6, 60)
(4, 40)

Salary (in dollars)

Time (in hours)

b) **Dave's Salary** $= 5t$

B.
a)

ROBIN'S SALARY

(4, 60)
(2, 30)

Salary (in dollars)

Time (in hours)

b) **Dave's Salary** $= 15t$

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C.

a)

ROBIN'S SALARY

(2, 20)
(1, 10)

b) Dave's Salary = 15t

D.

a)

ROBIN'S SALARY

(3, 60)
(2, 40)
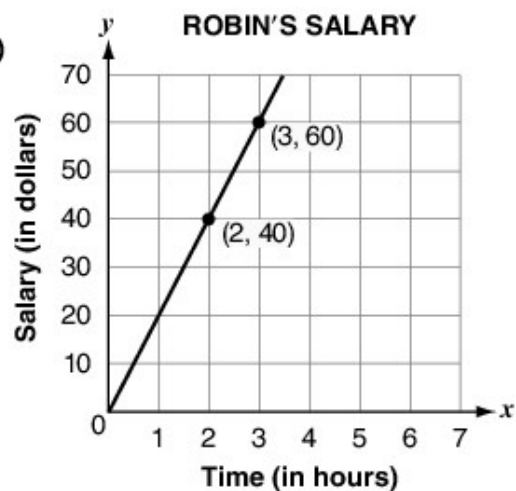
b) Dave's Salary = 2t

2. The graph below can be used to calculate John's typing speed.

JOHN'S TYPING SPEED
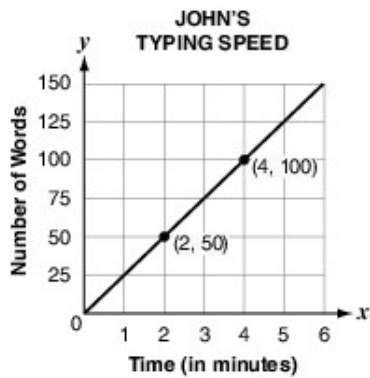
James types two times as fast as John. Which equation represents the number of words, w, James types in t minutes?

A. $w = 25t$

B. $w = 50t$

C. $w = 75t$

D. $w = 150t$

3. In 2001, the average price (in dollars) of a gallon of gas could be represented by the equation $y = 1.40x$, where x represents the number of gallons of gas. The table below shows the average price of gas in 2009.

Average Price of Gas in 2009

Number of gallons of gas	3	5	8	9
Price	$10.59	$17.65	$28.24	$31.77

How much more is the average price of a gallon of gas in 2009 compared to 2001?

A. $0.60

B. $2.13

C. $3.53

D. $5.66

4. The equation $y = 17.5x$ shows the rate for a hair cut at hair salon #1, where x is the number of hair cuts, and y is the total earned from hair cuts. The table below shows the amounts earned after different number of hair cuts at hair salon #2.

Hair Salon #2

Number of Hair Cuts (x)	Total Amount Earned (y)
2	$31.00
3	$46.50
5	$77.50

Which hair salon has a greater rate per hair cut and how much more per hair cut do they charge?

A. hair salon #1, by $1.50

B. hair salon #1, by $2.00

C. hair salon #2, by $1.50

D. hair salon #2, by $2.00

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5. Kendall created the table and the graph below comparing the volumes of cylinders with the same heights but different radii.

Approximate Volume of a Cylinder with Radius = 2 cm	
Height (cm)	**Approximate Volume** (cubic cm)
0	0
1	12.6
2	25.1
3	37.7
4	50.3

Approximate Volume of a Cylinder with a Radius of 3 cm
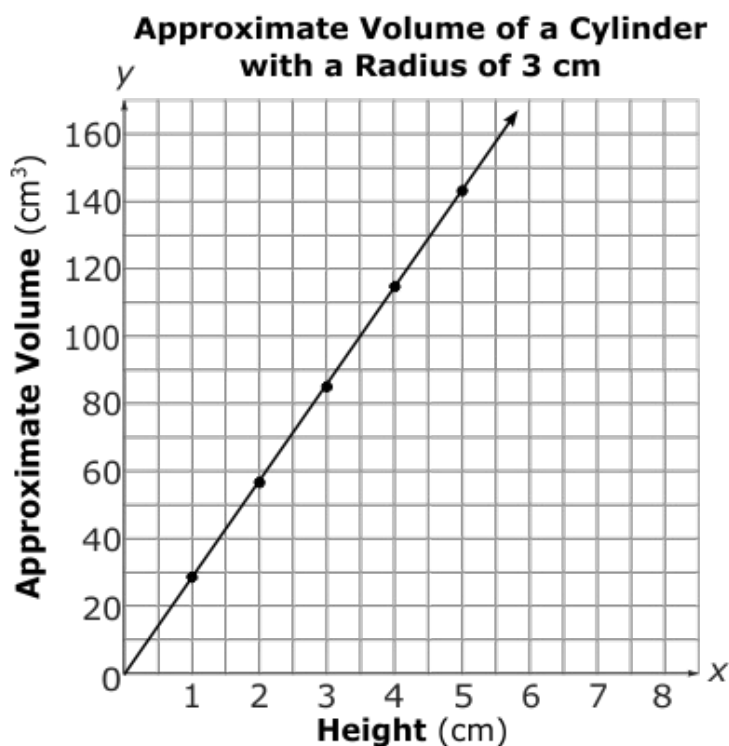
How does the slope of the line on the graph compare to the slope of the data in the table?

A. The slopes are the same.

B. The slope of the line in the graph is one unit greater than the slope of the data in the table.

C. The slope of the line in the graph is approximately $\frac{3}{2}$ of the slope of the data in the table.

D. The slope of the line in the graph is approximately $\frac{9}{4}$ of the slope of the data in the table.

6. The graph below shows the relationship between the amount of peanuts and the amount of chocolate in different packages of snack mix.

Trail Mix
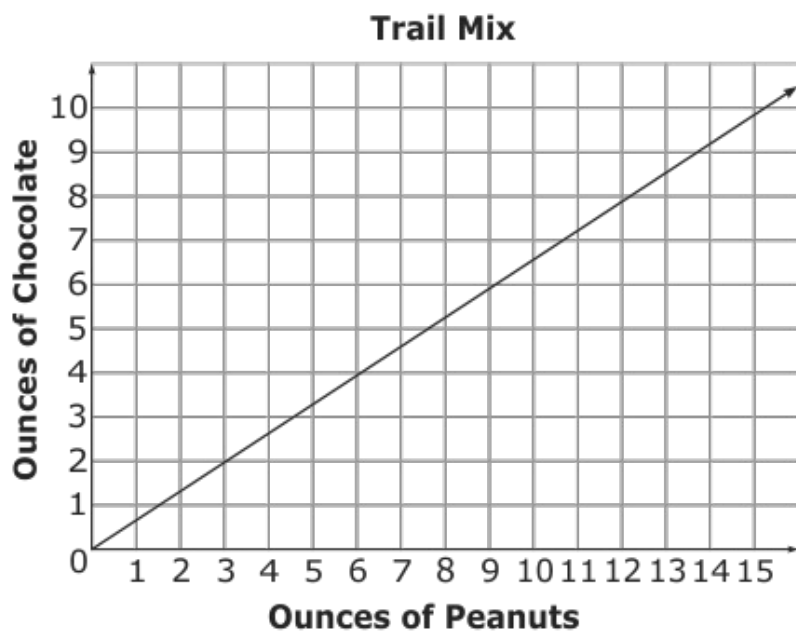
For each ounce of peanuts, how much chocolate is in the mix?

A. $\dfrac{1}{2}$ ounce

B. $\dfrac{2}{3}$ ounce

C. $\dfrac{3}{4}$ ounce

D. $\dfrac{3}{2}$ ounce

7. Alex and Susan are taking a trip. They are both driving at a constant speed. The graph shows the distance Alex has traveled.

Alex's Trip
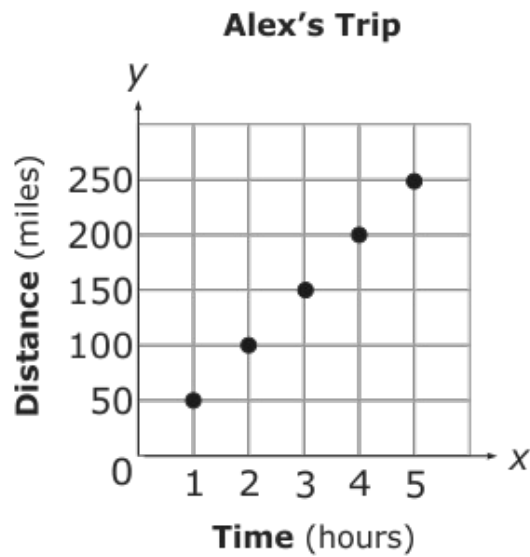
The table shows the distance Susan has traveled.

Time (hours)	2	3	4
Distance (miles)	90	135	180

After 6 hours, which statement is true?

A. Alex has driven 5 miles farther than Susan.

B. Alex has driven 30 miles farther than Susan.

C. Susan has driven 5 miles farther than Alex.

D. Susan has driven 30 miles farther than Alex.

8. Train E and Train G leave a city's train station at the same time. Train E's average speed can be represented by the equation $d = 45t$, where d is the distance the train has traveled in miles, and t is the time in hours. The time and distance Train G has traveled are shown in the table below.

Train G

Time (hours)	Distance (miles)
2	70
5	175
7	245

Which train is traveling the fastest and by how much?

A. Train E is traveling 25 miles per hour faster than Train G.

B. Train G is traveling 25 miles per hour faster than Train E.

C. Train E is traveling 10 miles per hour faster than Train G.

D. Train G is traveling 10 miles per hour faster than Train E.

9. The cost of ground beef at store J is represented by the equation $y = 3.39x$, where x is the pounds of ground beef and y is the cost. The cost of ground beef at store K is shown in the table below.

Store K

Ground Beef (pounds)	Cost
2.5	$7.48
3.1	$9.27
4.3	$12.86

Which store is less expensive for ground beef and by how much per pound?

A. Store J is less expensive by about $0.40 per pound.

B. Store K is less expensive by about $0.40 per pound.

C. Store J is less expensive by about $4.09 per pound.

D. Store K is less expensive by about $4.09 per pound.

10. At Stacey's Produce, the total cost, y, of x pounds of zucchini is represented by the equation $y = 0.8x$. At Tim's Produce, the total cost, y, of x pounds of zucchini is represented by the graph below.

Pounds of Zucchini
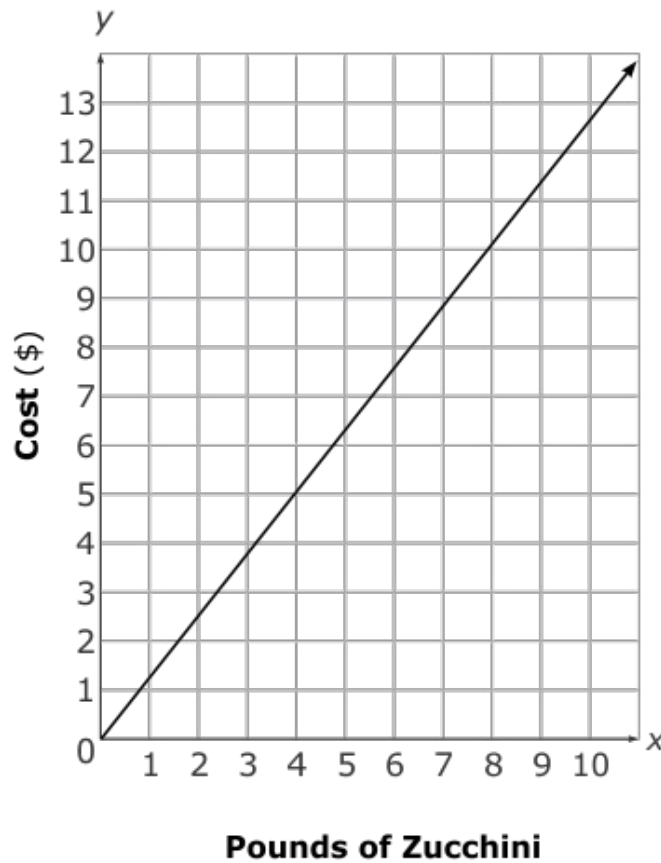
Which statement is true?

A. Stacey's Produce charges exactly half of what Tim's Produce charges for zucchini.

B. Stacey's Produce charges the same for zucchini as Tim's Produce charges.

C. Stacey's Produce charges more for zucchini than Tim's Produce charges.

D. Stacey's Produce charges less for zucchini than Tim's Produce charges.

11. Which is an equation of the line graphed below?
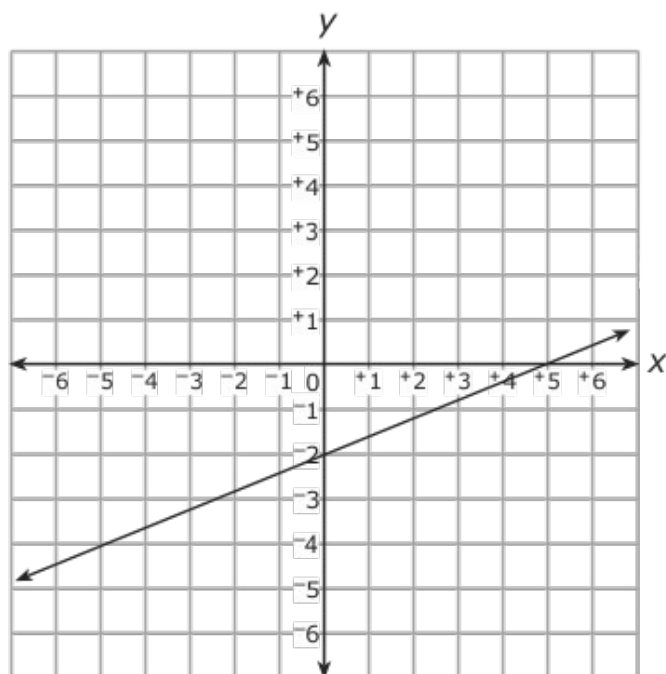
A. $y = 2.5x + 5$

B. $y = 2.5x - 2$

C. $y = 0.4x + 5$

D. $y = 0.4x - 2$

12. Which is the graph of $y = {}^{-}x - 2$?
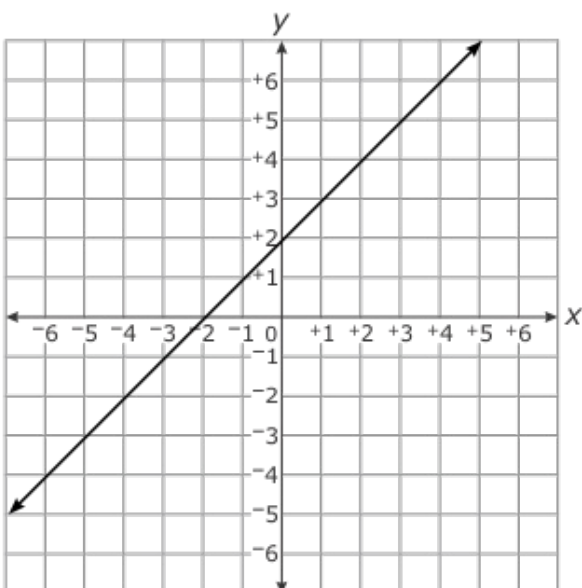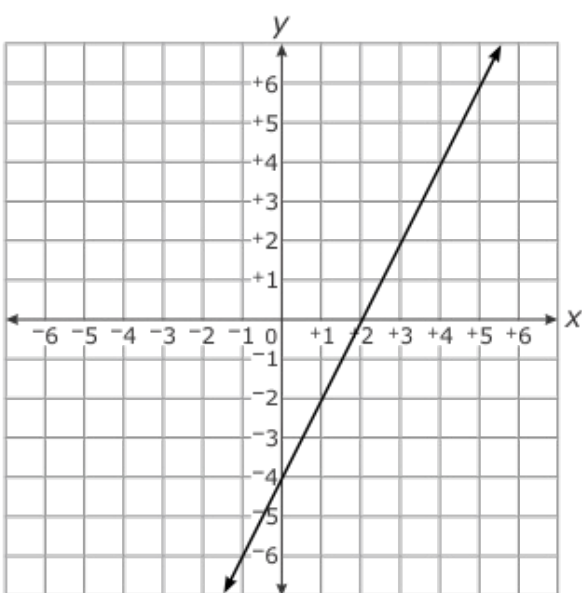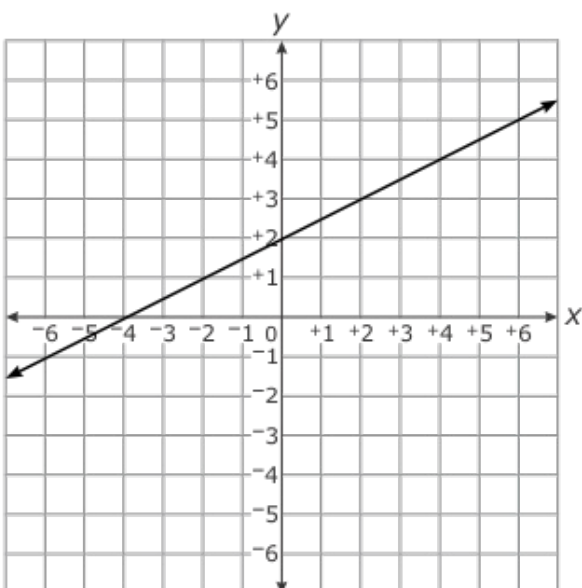
A.
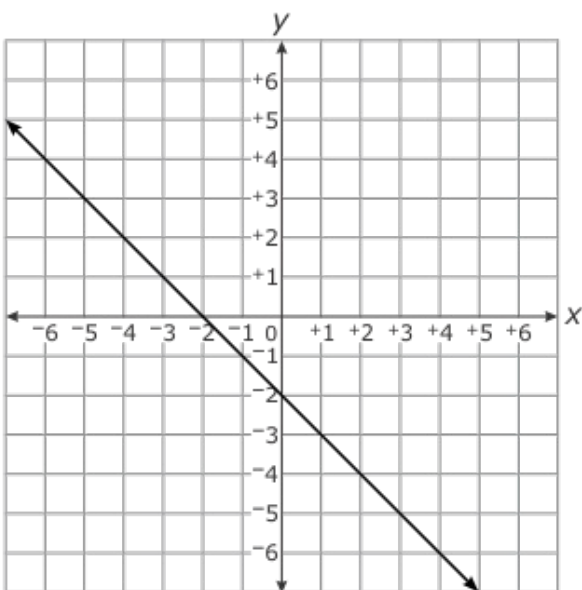
B.
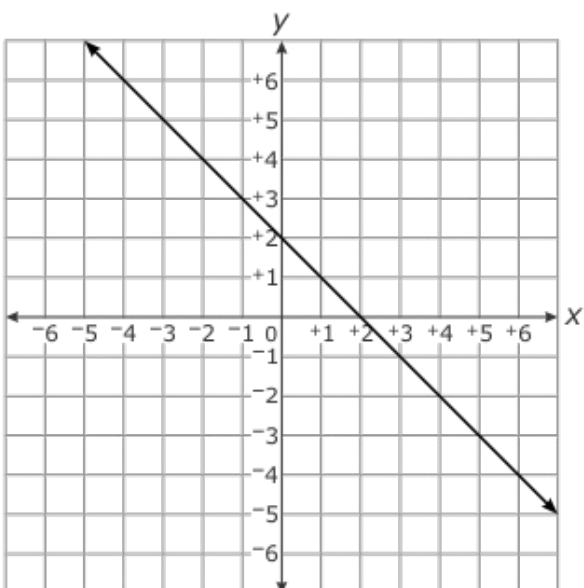
C.
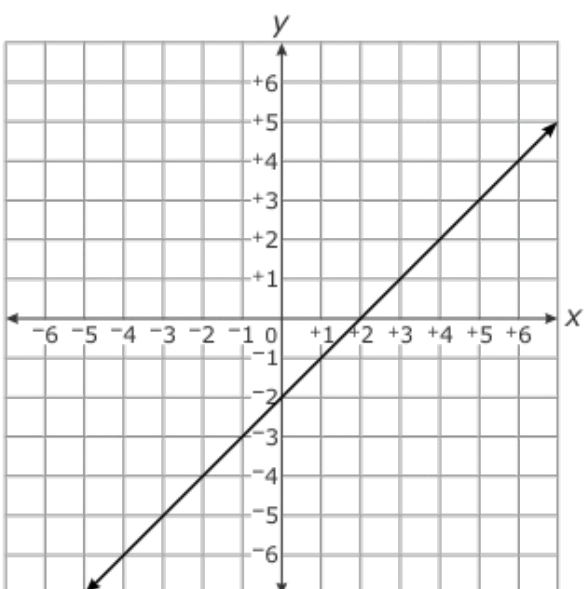
D.

13. Which choice shows the graph of $y = \frac{1}{2}x + 2$?
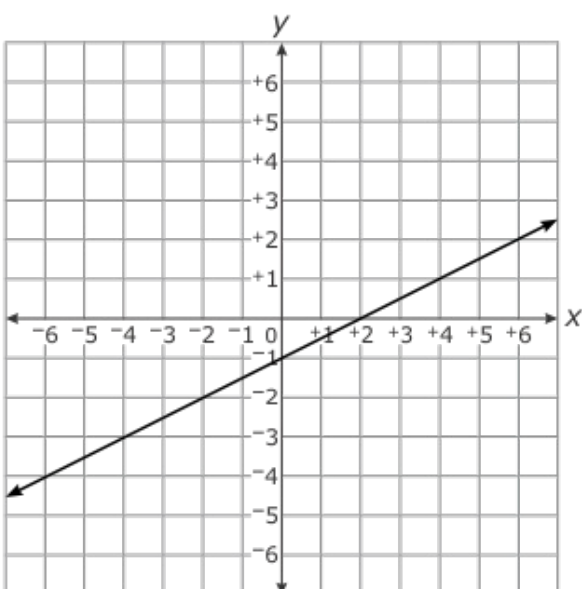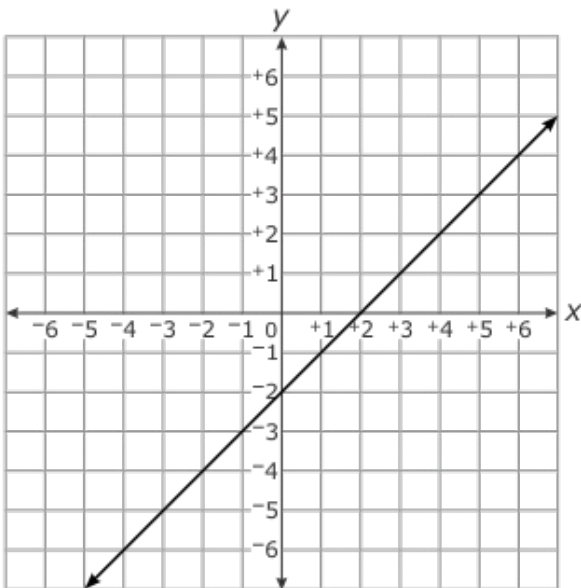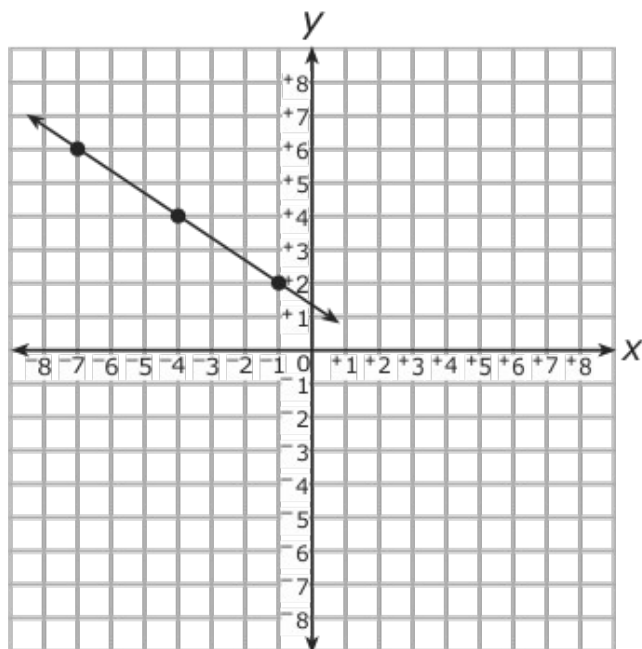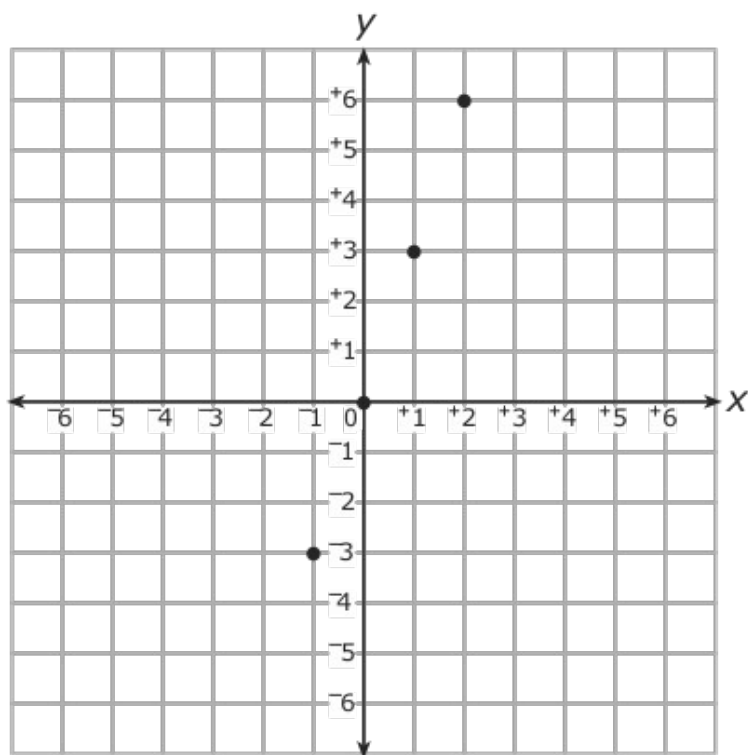
A.

B.

C.

D.

14. A line is graphed below.

What are the coordinates of another point the line passes through?
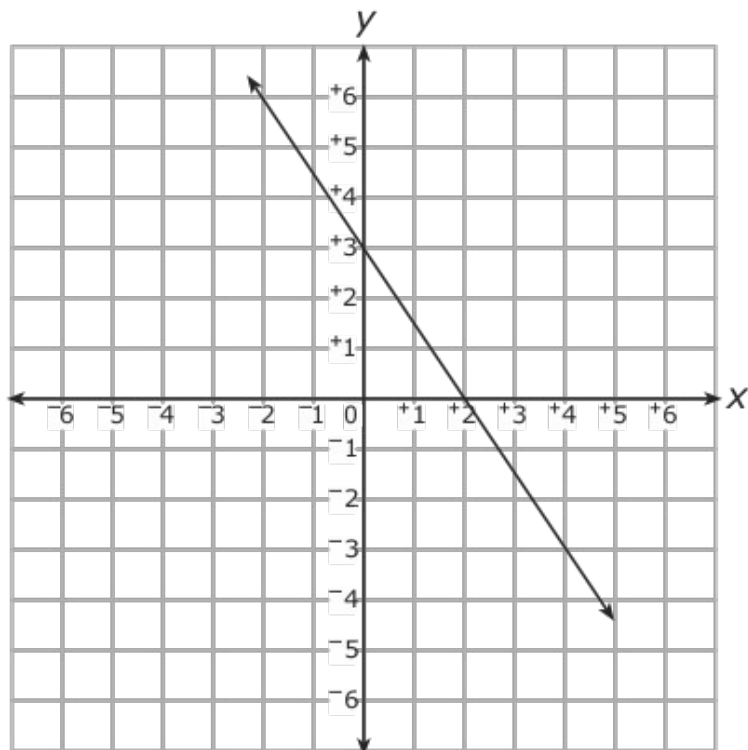
A. (⁻9, 8)

B. (1, 0)

C. (6, ⁻2)

D. (8, ⁻4)

15. What is the equation of a line that goes through the points on the graph below?

A. $y = x$

B. $y = x - 3$

C. $y = \dfrac{1}{3}x$

D. $y = 3x$

16. Which is an equation of the line graphed below?

A.
$$y = \frac{-3}{2}x - 3$$

B.
$$y = \frac{-3}{2}x + 3$$

C.
$$y = \frac{3}{2}x - 3$$

D.
$$y = \frac{3}{2}x + 3$$

17. Which equation has an infinite number of solutions?

A. $7(1 - 4x) + 3x = 7$

B. $5(2 - 4x) + 4x = 10$

C. $8(2 - 2x) + 16x = 9$

D. $6(3 - 2x) + 12x = 18$

18. Which equation has no solution?

   A. $-5+8x-9=3(x+3)$

   B. $-2(6-3x)=-12+6x$

   C. $6-2(3-2x)=-4(3-x)$

   D. $-(4x+9)=2x-3(2x+3)$

19. Three consecutive odd integers have a sum of 111. What is the smallest of the three integers?

   A. 33

   B. 35

   C. 37

   D. 39

20. The cost of production for boxes of markers is $500.00 to set up equipment plus $0.35 per box for materials. A box of markers sells for $2.85. How many boxes of markers must be sold for the company's income to equal the cost of production?

   A. 150

   B. 175

   C. 200

   D. 250

21. Triangle *GHI* has the angle measures of *G* = (2*x* + 5)°, *H* = (6*x* − 10)°, and *I* = (*x* + 5)°. What is the actual measurement of angle *H*?

   A. 90°

   B. 105°

   C. 110°

   D. 125°

22. What is the value of x in the equation $\frac{x-4}{6} = \frac{3}{7}$?

A.
$1\frac{3}{7}$

B.
$3\frac{1}{7}$

C.
$4\frac{1}{14}$

D.
$6\frac{4}{7}$

23. What is the value of x in the equation $13x - 2(6x - 4) = 72$?

A. 64

B. 68

C. 76

D. 80

24. A system of equations is shown below.

$$2x - 6y = {}^-6$$
$$y = 1.5x - 2.5$$

What is the value of x in the solution to the system?

A. 4

B. 3

C. 2

D. 1

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25. A system of equations is shown below.

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

$$5x + y = {}^{-}9$$

What is the solution to the system?

A. (2, 1)

B. (1, ‾14)

C. (‾1, ‾4)
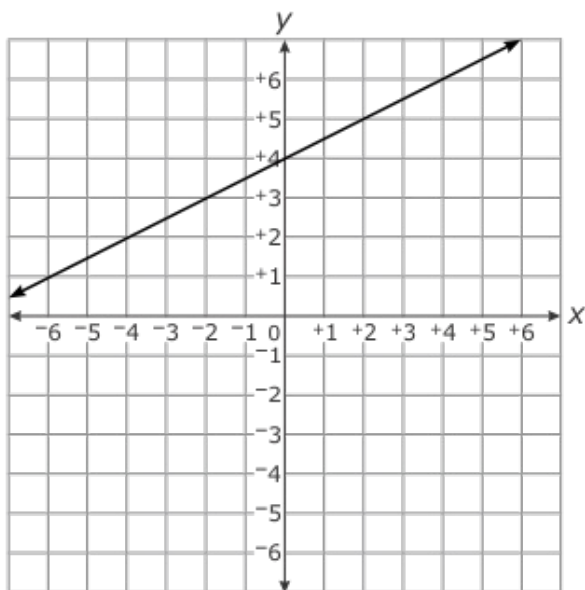
D. (‾2, 1)

26. A system of equations is shown below.

$$2x - y = 8$$

$$y = \frac{{}^{-}1}{2}x - \frac{1}{2}$$

What is the value of y in the solution to the system?

A. 4

B. 2

C. ‾2

D. ‾8

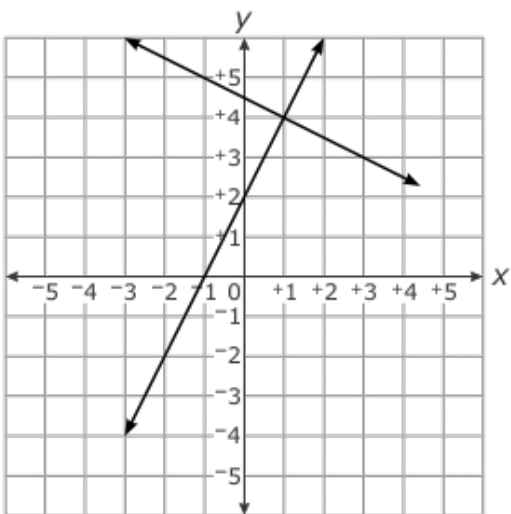27. The line of the equation $y = {}^-4x - 5$ will be graphed on the coordinate plane, intersecting the line below.

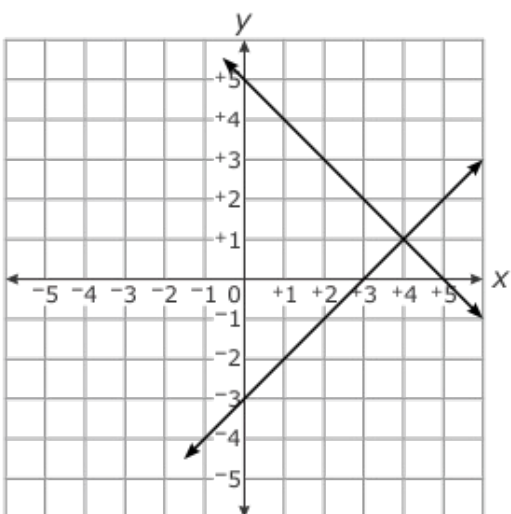What will be the point of intersection of the two lines?

A. (0, 4)

B. (0, ⁻5)

C. (⁻2, 3)

D. (3, ⁻2)

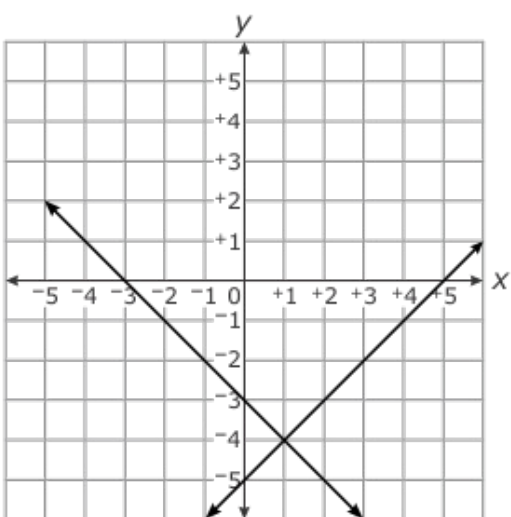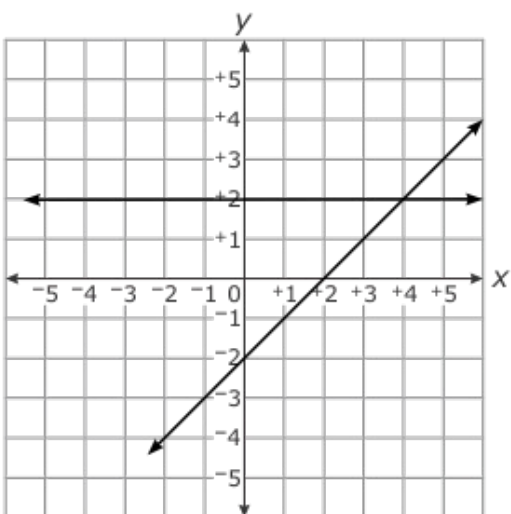28. Which graph shows a system of equations that has a solution of (4, 1)?

A.

B.

C.

D.

29. Jesse bought some pencils and erasers for $5.20. He bought 10 more pencils than erasers. A pencil costs $0.15, and an eraser costs $0.22. How many erasers did Jesse buy?

    A. 20

    B. 16

    C. 14

    D. 10

30. Seth has three more than twice as many baseball cards as Aaron. Together they have 33 baseball cards. How many cards does Seth have?

    A. 10

    B. 15