

Saturday Tutoring Program

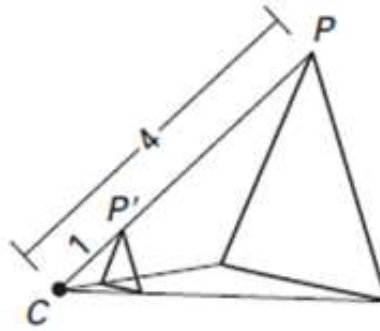
Name: _____

8th Grade

Saturday Tutoring Program 8th Mathematics Practice

4. In the dilation illustrated below, what is the scale factor, and does the dilation perform an enlargement or a reduction?

- A scale factor $\frac{1}{4}$, reduction
- B factor $\frac{1}{4}$; enlargement
- C scale factor 4; reduction
- D scale factor 4; enlargement



8. G.3

15. What is a *real life* example for the y-intercept of a linear situation?

8. EE.6 (8)

- A The cost of per text message you would have to pay if you don't subscribe to an unlimited text message cell phone plan.
- B The initial fee you pay for joining a health club.
- C How much you pay for every Blue-Ray disc you rent from Netflix.
- D The total allowance you have saved this month.

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- 16.** For the slope of a line, the run is greater than the rise. Which of the following could represent the slope of this line?

8. F. 5 (9)

A $\frac{2}{3}$

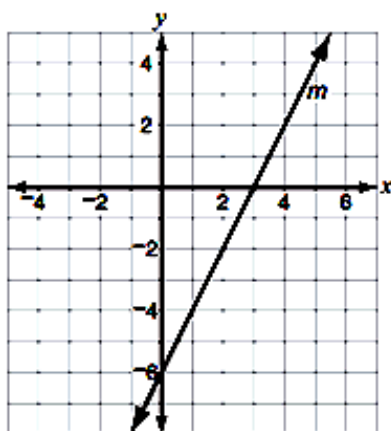
B 2

C 1

D $\frac{3}{2}$

- 18.** The graph below represents $y = 2x - 6$. Which describes how this graph would need to be shifted in order to graph $y = 2x$?

8. EE. 6 (18, 19)



- A Shift the each point 2 units up.
- B Shift each point 6 units up.
- C Shift each point 6 units down
- D Shift each point 2 units down.

11

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20. Which set of data represents a linear relation?

B. F. 3 (20)

A

x	y
10	3
15	6
25	9
30	12

B

x	y
13	7
15	10
17	13
19	16

C

x	y
1	1
2	4
4	16
8	64

D

x	y
0	1
2	11
3	17
5	26

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25. What is the rate of change in the table below?

x	y
10	60
20	120
30	180
40	240

A $\frac{10}{60}$

B $\frac{60}{10}$

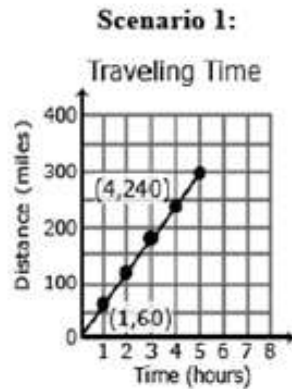
C $\frac{30}{180}$

D $\frac{40}{240}$

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26. Compare the three scenarios given below and determine which represents a greater speed or rate of change.

8. EE. 5



Scenario 2:

$$y = 55x$$

x is time in hours
 y is distance in miles

Scenario 3:

$$y = 70x$$

x is time in hours

y is distance in miles

- A Scenario 1
- B Scenario 2
- C Scenario 3
- D None of the above

Explain:

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30. Solve for x in the equation below.

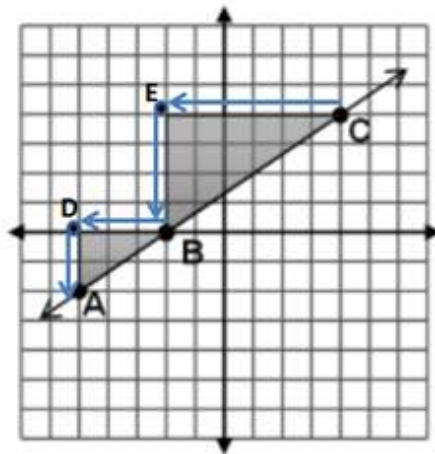
$$4(x + 2) + 2x = 3x + 3 + 11$$

8. EE. 7b

Show your work

34. Pedro and Ana used different information from the diagram below compute the slope of line AC. Pedro computed $\frac{DA}{BD}$ and Ana computed $\frac{EB}{CB}$. Which statement is true?

8. EE. 6 (34)

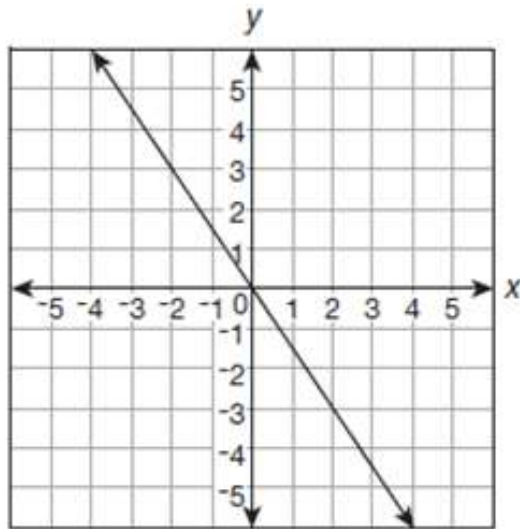


- A Only Ana's slope is correct.
- B Both students' slopes are correct
- C Only Pedro's slope is correct.
- D Neither student's is correct.

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35. What is the equation of the line that is graphed below?

8. EE. 6



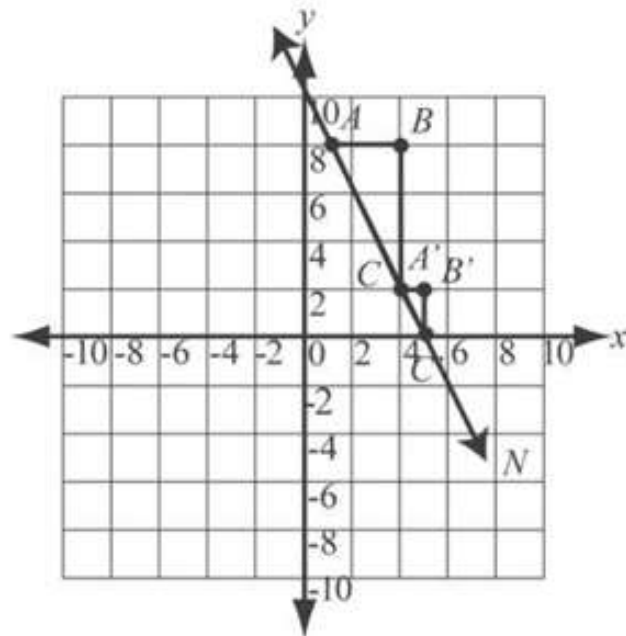
- A $y = \frac{2}{3}x$
- B $y = \frac{3}{2}x$
- C $y = -\frac{3}{2}x$
- D $y = -\frac{2}{3}x$

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36. Peter and Lissette used different information from the diagram shown below to compute the slope

of line AN . Peter computed the slope of triangle $A'B'C'$, $\frac{Rise}{Run} = \frac{2}{-1}$ and Lissette computed the

slope of triangle ABC , $\frac{Rise}{Run} = \frac{-6}{3}$.



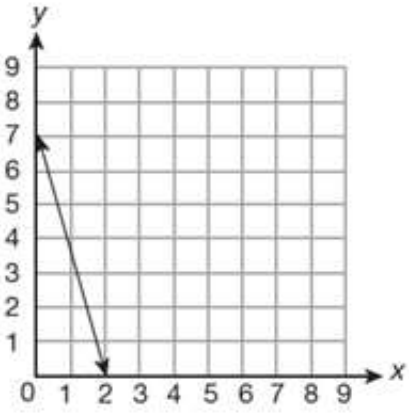
8. EE. 6

Who is correct?

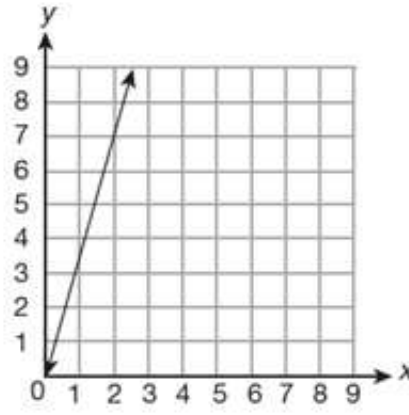
- A Only Peter is correct
- B Both are correct
- C Only Lissette is correct
- D Both are incorrect

37. Which graph has the equation $y = \frac{1}{4}x + 7$?

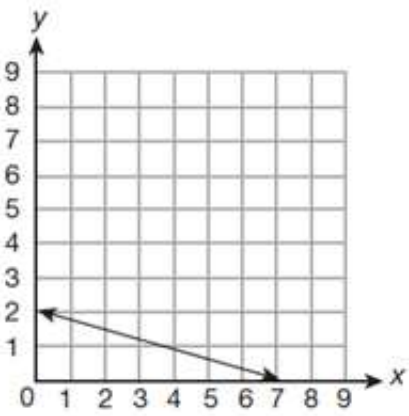
8. EE. 6



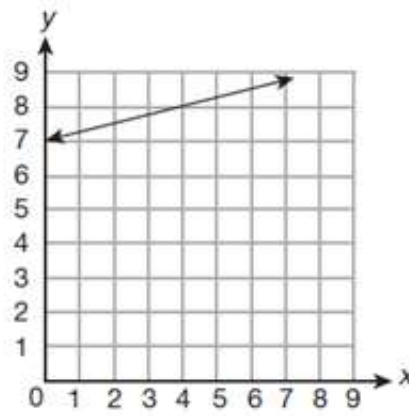
A



C

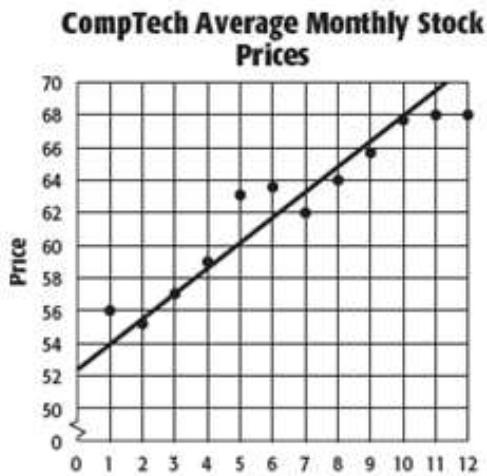


B



D

40. John drew the line of best fit on the scatter plot below. Which of the following best represents the slope of the line of best fit?



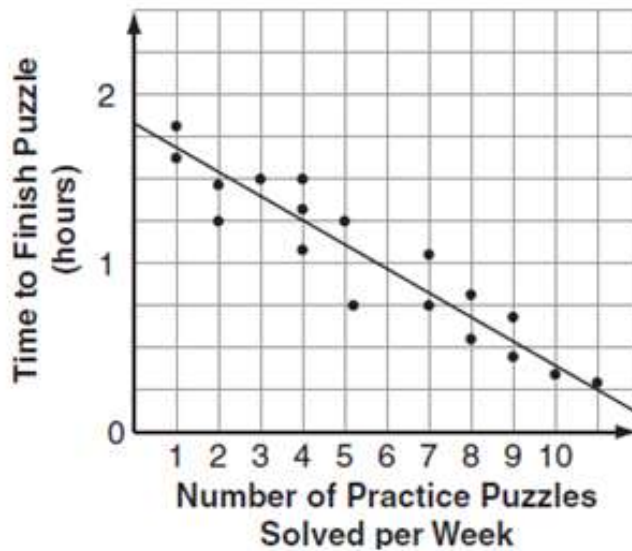
8.SP.2

- A $\frac{3}{2}$
- B $\frac{1}{2}$
- C $\frac{1}{3}$
- D $\frac{2}{3}$

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41. Ginny belongs to a club where members try to solve puzzles in the fastest time possible. She did a survey to see how much the club members practiced each week. After a recent puzzle-solving contest, she constructed the scatter plot below. The line of best fit is drawn.

8.SP.2



Based on the plot, approximately how many practice puzzles per week do members solve if they finish the contest puzzle in one hour?

- A 2
- B 4
- C 6
- D 10

43. Mr. Wallace surveyed 75 students at Poole Middle School to find out the students' favorite place to eat lunch. The results are shown below.

FAVORITE PLACE TO EAT LUNCH

	Cafeteria	Outside	Total
Boys	16	21	37
Girls	24	14	38
Total	40	35	75

B. SP. 4

Which table shows the approximate relative frequencies of Mr. Wallace's data?

FAVORITE PLACE TO EAT LUNCH

A

	Cafeteria	Outside	Total
Boys	16%	21%	37%
Girls	24%	14%	38%
Total	40%	35%	75%

FAVORITE PLACE TO EAT LUNCH

C

	Cafeteria	Outside	Total
Boys	40%	60%	49%
Girls	60%	40%	51%
Total	100%	100%	100%

FAVORITE PLACE TO EAT LUNCH

B

	Cafeteria	Outside	Total
Boys	21%	28%	49%
Girls	32%	19%	51%
Total	53%	47%	100%

FAVORITE PLACE TO EAT LUNCH

D

	Cafeteria	Outside	Total
Boys	43%	57%	100%
Girls	63%	37%	100%
Total	53%	47%	100%

Additional Problems:

1. Alice compared the graphs of two functions.
- The first function was $y = 3x + 4$.
 - The second function fits the values in the table below.

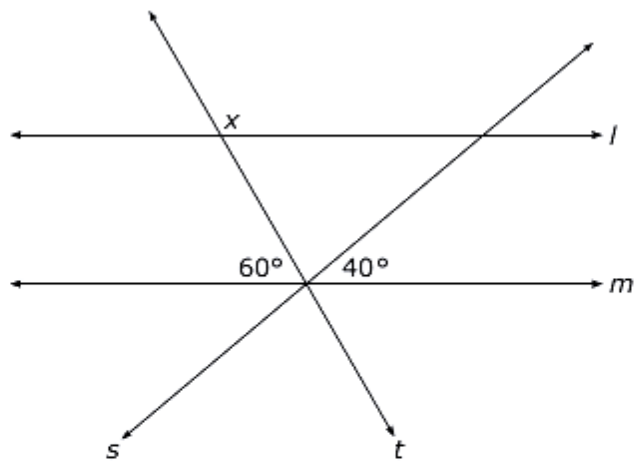
x	y
2	17
5	32
8	47
11	62

What is the distance between the y -intercepts of the two functions?

- A 1
- B 2
- C 3
- D 4
-
2. What value of x satisfies the equation $\frac{-4x - 2}{3} = -6$?
- A -16
- B -12
- C 0
- D 4

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3. Lines l and m are parallel to one another and cut by transversals s and t .

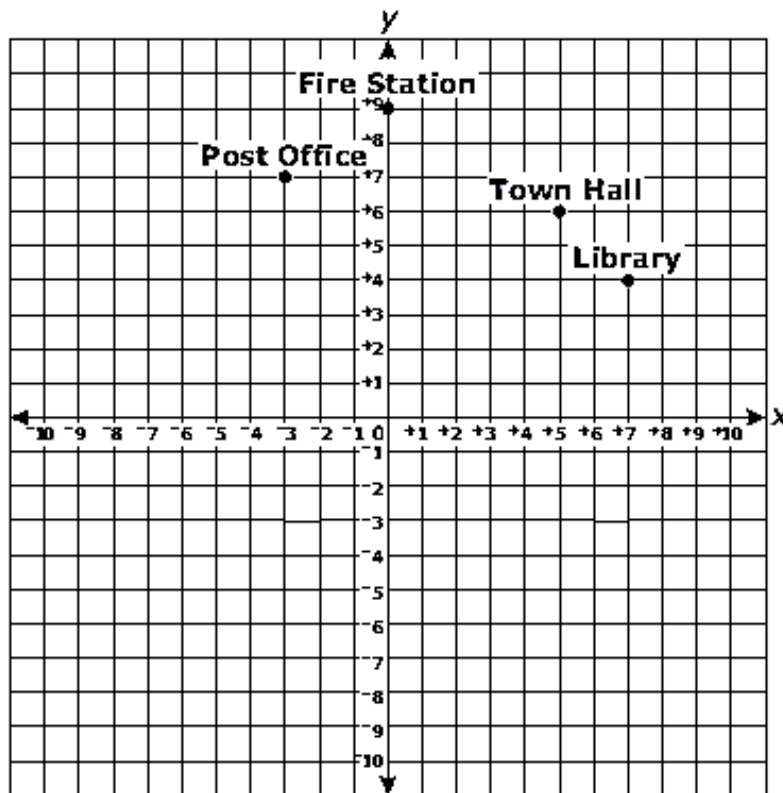


What is the value of x ?

- A 40°
 - B 80°
 - C 120°
 - D 140°
4. The measures of the angles of a triangle are 50° , 35° , and 95° . What is the measure of the largest exterior angle of the triangle?
- A 85°
 - B 130°
 - C 145°
 - D 150°

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5. A town's buildings were graphed on a coordinate grid.



Which equation would represent a line drawn to connect the Town Hall and Post Office?

- A $y = -\frac{2}{3}x + \frac{28}{3}$
- B $y = -\frac{1}{8}x + \frac{53}{8}$
- C $y = \frac{3}{5}x + 9$
- D $y = \frac{1}{8}x + \frac{59}{3}$