

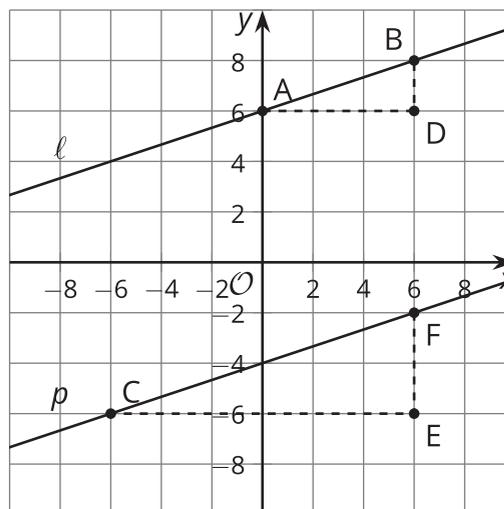
## Lesson 11 Practice Problems

- Write an equation for a line that passes through the origin and is perpendicular to  $y = 5x - 2$ .
- Match each line with a perpendicular line.
 

<p>A. <math>y = 5x + 2</math></p> <p>B. <math>y - 2.25 = -2(x - 2)</math></p> <p>C. the line through <math>(-1, 5)</math> and <math>(1, 9)</math></p>	<p>1. the line through <math>(2, 12)</math> and <math>(17, 9)</math></p> <p>2. <math>y = -\frac{1}{2}x + 5</math></p> <p>3. <math>2x - 4y = 10</math></p>
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- The rule  $(x, y) \rightarrow (y, -x)$  takes a line to a perpendicular line. Select **all** the rules that take a line to a perpendicular line.
  - $(x, y) \rightarrow (2y, -x)$
  - $(x, y) \rightarrow (-y, -x)$
  - $(x, y) \rightarrow (-y, x)$
  - $(x, y) \rightarrow (0.5y, -2x)$
  - $(x, y) \rightarrow (4y, -4x)$
- Write an equation of the line with  $x$ -intercept  $(3, 0)$  and  $y$ -intercept  $(0, -4)$ .
  - Write an equation of a line parallel to the line  $y - 5 = \frac{4}{3}(x - 2)$ .

(From Unit 6, Lesson 10.)

5. Lines  $\ell$  and  $p$  are parallel. Select **all** true statements.



- A. Triangle  $ADB$  is similar to triangle  $CEF$ .
- B. Triangle  $ADB$  is congruent to triangle  $CEF$ .
- C. The slope of line  $\ell$  is equal to the slope of line  $p$ .
- D.  $\sin(A) = \sin(C)$
- E.  $\sin(B) = \cos(C)$

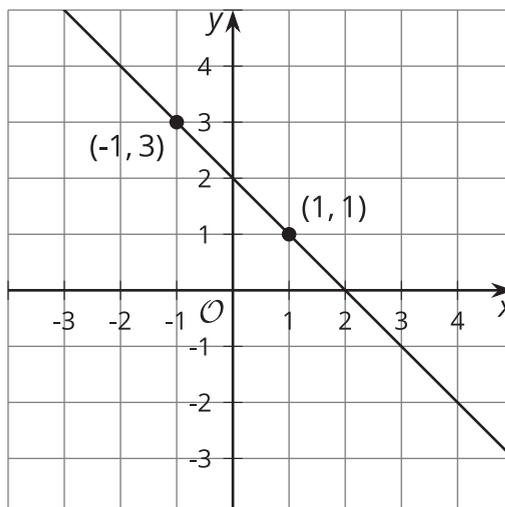
(From Unit 6, Lesson 10.)

6. Select the equation that states  $(x, y)$  is the same distance from  $(0, 5)$  as it is from the line  $y = -3$ .

- A.  $x^2 + (y + 5)^2 = (y + 3)^2$
- B.  $x^2 + (y - 5)^2 = (y + 3)^2$
- C.  $x^2 + (y + 5)^2 = (y - 3)^2$
- D.  $x^2 + (y - 5)^2 = (y - 3)^2$

(From Unit 6, Lesson 8.)

7. Select **all** equations that represent the graph shown.



- A.  $y = -x + 2$
- B.  $(y - 3) = -(x + 1)$
- C.  $(y - 3) = -x - 1$
- D.  $(y - 3) = (x - 1)$
- E.  $(y + 1) = -(x - 3)$

(From Unit 6, Lesson 9.)

8. Write a rule that describes this transformation.

original figure	image
(3, 2)	(6, 4)
(4, -1)	(8, -2)
(5, 1)	(10, 2)
(7, 3)	(14, 6)

(From Unit 6, Lesson 3.)