

Directions: Identify if the set of lines are parallel, perpendicular, coincidental, or neither.

$$1) \begin{cases} y = -2x + 3 \\ y = -2x - 5 \end{cases}$$

$$2) \begin{cases} 2y - 8x = -10 \\ y = 4x - 5 \end{cases}$$

$$3) \begin{cases} y = 4x - 3 \\ -4x - y = -3 \end{cases}$$

$$4) \begin{cases} y = 0.25x \\ y = -4x - 5 \end{cases}$$

Directions: Write the equation of the line with the following characteristics.

5) Is parallel to the equation $y = 4x - 2$

6) Is coincidental to the equation $y = 5x$

7) Is perpendicular to the equation $y = 2x - 4$

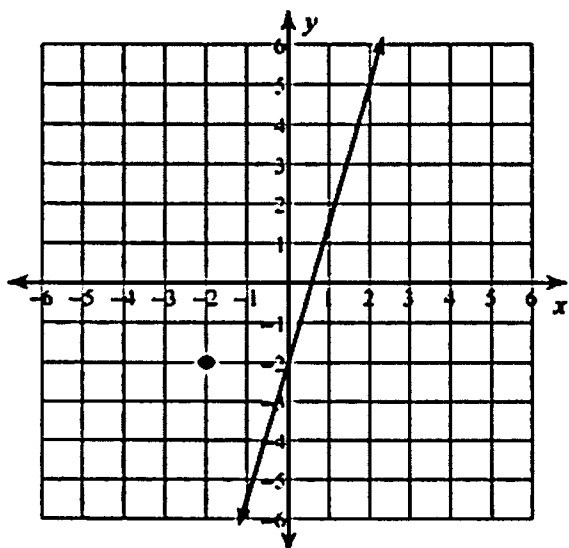
8) Is parallel to $y = 4x - 2$ & has a y-int. of 3

9) Is perpendicular to $y = -0.25x - 2$ and passes through the point (3, 4)

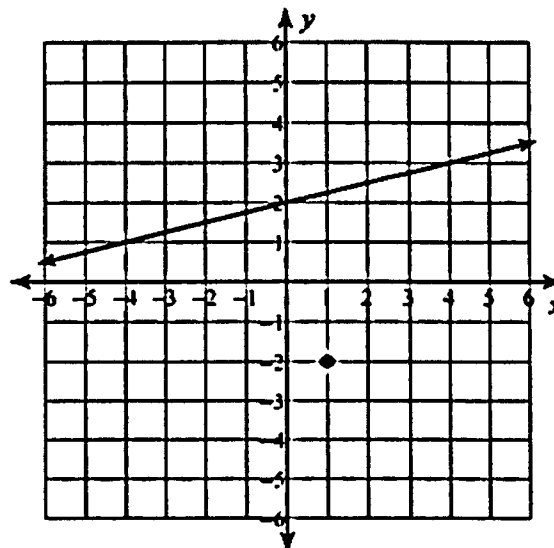
10) Is parallel to $2x - 4y = 8$ and passes through the point (0, 6)

Directions: Find each equation that:

11) ...is parallel to the given line and passes through the given point.

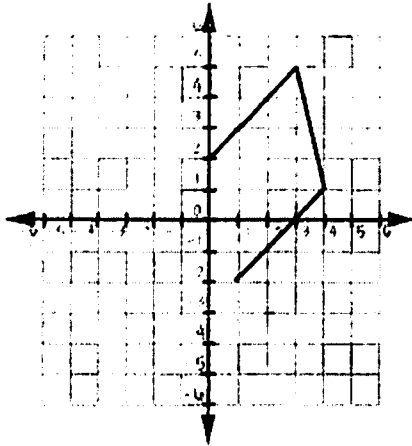


12) ...is perpendicular to the given line and passes through the given point.

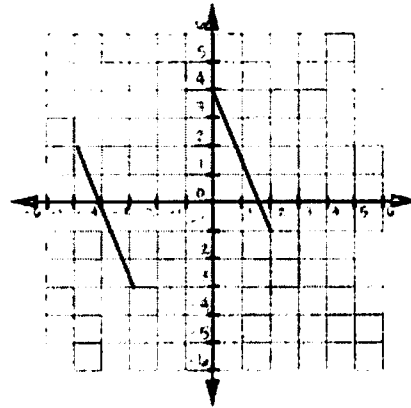


Directions: Find the equation of the line that can be used to finish creating the listed quadrilateral.

13) Parallelogram



14) Rhombus



Directions: Partition each segment by the given ratio.

15) $(1, 3)$ & $(8, 4)$; 4:1

16) $(-2, 1)$ & $(4, 5)$; 3:7

17) $(8, 0)$ & $(3, -2)$; 1:4

18) $(1.5, 6)$ & $(1.5, -2)$; 3:5

19) $(-14, 3)$ & $(10, -4)$; 1:2

20) $(4, 7)$ & $(8, 7)$; 2:2

Directions: Find the midpoint of each segment.

21) $A(3, 5)$ & $B(-2, 6)$

22) $C(0, 4)$ & $D(5, -2)$

23) $E(-2, -4)$ & $F(-8, 2)$

Directions: Find the missing endpoint if the midpoint is $(3, 6)$.

24) $A(5, 11)$

25) $A(0, -4)$