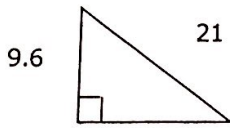


UNIT 3 MIXED REVIEW

KEY

TOC _____

1) Find the missing side of the right triangle. Then, find its perimeter and area.



$$P = 47.3 \text{ units}$$

$$A = 89.8 \text{ units}^2$$

2) Identify the slope and y-intercept for each equation.

a) $2x + 3y = 6$

$$m = -\frac{2}{3}$$

$$b = (0, 2)$$

b) $-3x + 4y = 12$

$$m = \frac{3}{4}$$

$$b = (0, 3)$$

c) $10y - 3x = 50$

$$m = \frac{3}{10}$$

$$b = (0, 5)$$

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

$$m = \frac{1}{2}$$

$$b = (0, 6)$$

e) $y = -x$

$$m = -1$$

$$b = (0, 0)$$

f) $-2x - 6y = 4$

$$m = -\frac{1}{3}$$

$$b = (0, -\frac{2}{3})$$

3) Convert to standard form.

a) $y = 3x + 2$

$$3x - y = -2$$

b) $y = \frac{1}{2}x + 3$

$$x - 2y = -6$$

c) $y = -\frac{1}{3}x - 2$

$$x + 3y = -6$$

4) Write the equation of the line with the given slope and y-intercept in slope-intercept form.

a) Slope $\frac{1}{2}$, y-intercept $(0, 3)$

$$y = \frac{1}{2}x + 3$$

b) slope -3 , thru $(-2, 3)$

$$y = -3x - 3$$

5) Write the equation of the line that goes through the following two points in slope-intercept form.

a) $(2, 3)$ and $(0, 1)$

$$y = x + 1$$

b) $(-1, 3)$ and $(2, -9)$

$$y = -4x - 1$$

c) $(-1, -1)$ and $(3, 7)$

$$y = 2x + 1$$

6) Write the equation of the line that goes through $(2, 4)$ and is parallel to $y = 3x + 2$.

$$y = 3x - 2$$

7) Write the equation of the line that goes through $(1, -5)$ and is perpendicular to $y = \frac{1}{8}x + 2$.

$$y = -8x + 3$$

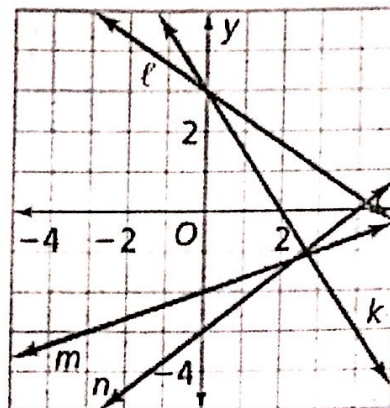
9. Tell which line at the right is the graph of each equation in parts (a)–(d). Explain.

a. $2x + 3y = 9$

b. $2x - 3y = 9$

c. $x - 3y = 6$

d. $3x + 2y = 6$



$a \equiv l$

$b \equiv n$

$c \equiv m$

$d \equiv k$

For Exercises 21–26, write the equation in $y = mx + b$ form. Identify the x-intercept, y-intercept, and slope.

21. $-2x - y = -5$

22. $6x + 3y = -9$

23. $x - y = 4$

$y = -2x + 5$

$y = -2x - 3$

$y = x - 4$

x-int $(\frac{5}{2}, 0)$

x-int $(-\frac{3}{2}, 0)$

x-int $(4, 0)$

y-int $(0, 5)$

y-int $(0, -3)$

y-int $(0, -4)$

$m = -2$

$m = -2$

$m = 1$

24. $3x + 4y = 12$

25. $-7x + 2y = -16$

26. $x - 5y = 55$

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

$y = \frac{7}{2}x - 8$

$y = \frac{1}{5}x - 11$

x-int $(4, 0)$

x-int $(\frac{16}{7}, 0)$

x-int $(55, 0)$

y-int $(0, 3)$

y-int $(0, -8)$

y-int $(0, -11)$

$m = -\frac{3}{4}$

$m = \frac{7}{2}$

$m = \frac{1}{5}$