Lesson 5-5C - Parallel and Perpendicular Lines

Answers (repuestas) p.262 #12-16 even; #19-26 all
p.262 #1-13 odd:

12) yes, same slope

14) $y = -3x + 9$

16) $y = -\frac{7}{2}x - 20$

19) $m = -\frac{1}{2}$

20) $m = \frac{1}{3}$

21) $m = -\frac{5}{7}$

22) $m = 5$

23) $m = \frac{3}{2}$

24) m =Undefined

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

26) $y = -x + 10$

Due Tomorrow: p.262 #10, 15, 27, 32-40 all

Find the slope of a line perpendicular to the graph of each equation.

19. $y = 2x$

20. $y = -3x$

21. $y = \frac{7}{5}x - 2$

22. $y = -\frac{x}{5} - 7$

23. $2x + 3y = 5$

$-2x \quad -2x$

$\frac{3y}{3} = \frac{-2x + 5}{3}$

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

24. $y = -8$

$y = 0x - 8$

$\frac{1}{0}$

21. $y = \frac{7}{5}x - 2$ **16.** $y = -\frac{7}{5}x + 6; (-4, -6$

1) *Write the slope* of a line **perpendicular** to $y = 5x + 3$.

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

2) *Write the equation* of the line that is **parallel** to $y = 2x - 4$ and passes through point (4, 9).

Name:
Period:
Date:

$m = 2$

$b = 1$

$y = 2x + 1$

$y = mx + b$

$9 = 2(4) + b$

$9 = 8 + b$

$1 = b$

Perpendicular lines: the slopes are negative reciprocals.

The negative reciprocal of $\frac{-7}{11}$ is ___.

The slope of the line y = ___x + 10 is ____.

The slope of the perpendicular line is

Write the equation of the line that is perpendicular to $y = \frac{1}{3}x$ and passes through point (6, -5).

x y

$m = -3$

$b = 13$

$y = -3x + 13$

$y = mx + b$

$-5 = -3(6) + b$

$-5 = -18 + b$

$+18 \quad +18$

$13 = b$

parallel to $y = \frac{3}{2}x - 12$

passes through $(8, -5)$

$$y = \frac{3}{2}x - 17$$

perpendicular to $-2x + y = 12$

$+2x \quad +2x$

and passes through $(6, -3)$

$m = -\frac{1}{2}$ $\quad -3 = -\frac{1}{2}(6) + b$

$b = 0$ $\quad -3 = -3 + b$

$+3 \quad +3$

$c = b$

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

Find the equation for each line.

41.