T P-2 Perpendicular Line Retake Problems

Find the slope of a line that is perpendicular to each equation that is given.

1. $y = 4x + 2$

2. $y = 5 - 2x$

3. $2y = 3x - 8$

4. $6y - 5x = 0$

5. $\frac{1}{3}x - \frac{3}{8}y = 11$

6. $x = 4y + 7$

State whether the graphs of the following equations are perpendicular or neither.

7. $x + y = 5$
   $x + y = -10$

8. $x + y = 5$
   $x - y = 5$

9. $y = 2x$
   $y = 2x - 4$

10. $2y + 3x = 5$
    $3y - 2x = 5$

11. $3x - 8y = 11$
    $3x - 6y = 10$

12. $2y + 3x = 5$
    $3y + 3x = 5$

13. $\frac{1}{3}x + \frac{2}{3}y = \frac{3}{5}$
    $2x + 4y = 7$

14. $\frac{1}{2}x + \frac{1}{3}y = 2$
    $2x - 3y = 4$

Find an equation of the line that passes through each given point and is perpendicular to the line with the given equation.

15. $(-2, 0)$ $y = -3x + 7$

16. $(2, 5)$ $3x + 5y = 7$

17. $(0, -4)$ $6x - 3y = 5$

18. $(12, 6)$ $\frac{3}{4}x + \frac{1}{2}y = 2$

19. $(1, -5)$ $8y = x + 16$

20. $(4, -1)$ $y = x + 2$

21. $(2, 4)$ $-7y = 2x + 35$

22. $(5, 0)$ $y = -x + 5$