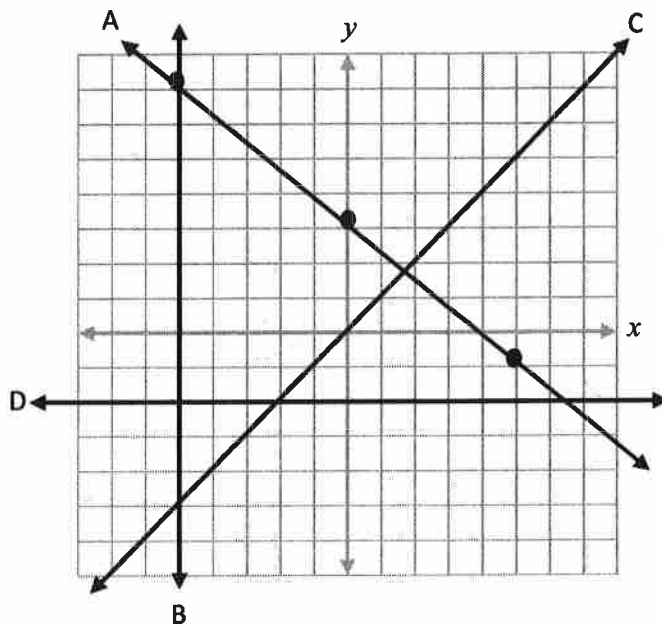**Write the equation of each graphed line.**

1. Line A) $y = -\frac{4}{7}x + 3$

2. Line B) $x = -5$
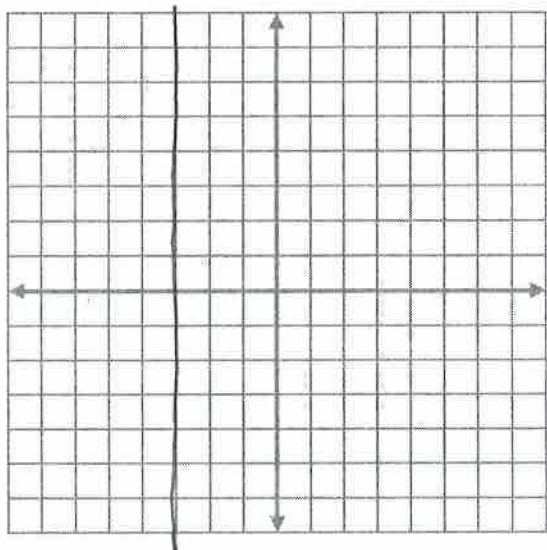
3. Line C) $y = x$

4. Line D) $y = -2$
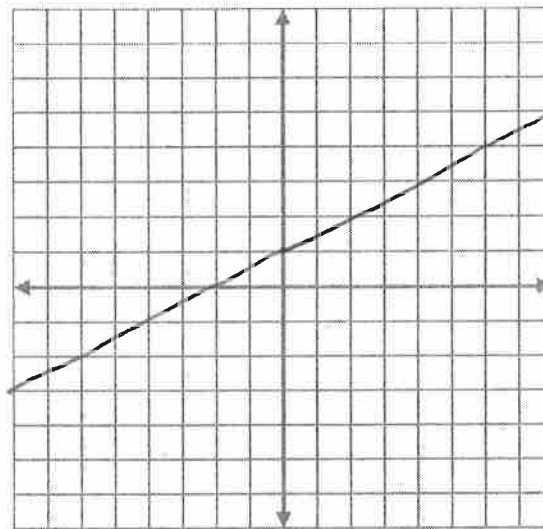

Graph the line that passes through the given points and then write the equation of the line.

5. $(-3, 1)$ and $(3, -7)$

Equation: $x = -3$

6. $(2, 2)$ and $(4, 3)$

Equation: $y = \frac{1}{2}x + 1$

Using the slope formula , find the slope of the line that passes through the given points.

7. $(3, 0)$ and $(-2, -7)$

$m = \frac{7}{5}$

8. $(22, 4)$ and $(97, -4)$

$m = -\frac{8}{75}$

9. $(-6, -1)$ and $(-8, -1)$

$m = 0$

Using slope –intercept form (y=mx+b), write the equation of the line with the given slope and passing through the given point.

10. $m=3$ (2,-1)

11. $m=\frac{2}{3}$ (3,4)

12. $m=0$ (-2,-4)

Equation: $y=3x-7$ Equation: $y=\frac{2}{3}x+2$ Equation: $y=-4$

Using slope –intercept form (y=mx+b), write the equation of the line passing through the given points.

13. (5, 2) and (-3, 18)

14. (5, -2) and (-10, 7)

Equation: $y=-2x+12$ Equation: $y=-\frac{3}{5}x+1$

15. (3, 8) and (3, -4)

16. (-1, -2) and (-4, 4)

Equation: $x=3$ Equation: $y=-2x-4$

What slope would a line parallel to the given line have? What slope would a perpendicular line have?

17. $y=3x-4$

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

19. $y=\frac{7}{8}x-6$

Parallel slope 3

Parallel slope $-\frac{2}{5}$

Parallel slope $\frac{7}{8}$

$\perp$ slope $-\frac{1}{3}$

$\perp$ slope $\frac{5}{2}$

$\perp$ slope $-\frac{8}{7}$

Write the equation of the line parallel to the given line through the given point.

20. Parallel to $y=-x$ through (2, 20)

21. Parallel to $2x+5y=-3$ through (10, 1)

$y=-x+22$

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

Write the equation of the line perpendicular ($\perp$) to the given line through the given point.

22. $\perp$ to $y=\frac{-5}{3}x-\frac{4}{3}$ through (-5, 10)

23. $\perp$ to $y=2x+7$ through (4, -8)

$y=\frac{3}{5}x+13$

$y=-\frac{1}{2}x-6$