NAME

Module 8 Writing Linear Equations of Two Variables

Lesson 2 Writing Equations of Lines, Given the Slope and *y*-Intercept

Use the given information to write the equation of the line in slope-intercept form.

1. Slope: $\frac{2}{3}$ *y*-intercept: –3
$y = \frac{2}{3}x - 3$

2. Slope: $-\frac{5}{2}$ *y*-intercept: 4
$y = -\frac{5}{2}x + 4$

3. Slope: $\frac{1}{8}$ *y*-intercept: 7
$y = \frac{1}{8}x + 7$

4. Slope: undefined Passes through: (0, 4)
$x = 0$

5. Slope: $-\frac{1}{2}$ *y*-intercept: –1
$y = -\frac{1}{2}x - 1$

6. Slope: 4 *y*-intercept: 3
$y = 4x + 3$

7. Slope: $\frac{1}{3}$ *y*-intercept: –9
$y = \frac{1}{3}x - 9$

8. Slope: $\frac{7}{5}$ *y*-intercept: $-\frac{1}{8}$
$y = \frac{7}{5}x - \frac{1}{8}$

9. Slope: 0 Passes through: (2, 5)
$y = 5$

10. Slope: $-\frac{1}{5}$ *y*-intercept: 1
$y = -\frac{1}{5}x + 1$

Write the slope-intercept form of the equation of the line described.

11. The line is perpendicular to the line $y = \frac{9}{4}x - 2$ and passes through the point (0, –6).
$y = -\frac{4}{9}x - 6$

12. The line is parallel to the line $y = x + 3$ and passes through the point (0, 4).
$y = x + 4$

13. The line is perpendicular to the line $y = -3x - 2$ and passes through the point (0, 8).
$y = \frac{1}{3}x + 8$

14. The line is parallel to the line $y = \frac{3}{4}x + 5$ and passes through the point (0, 1).
$y = \frac{3}{4}x + 1$

15. The line is parallel to the line $y = -\frac{1}{7}x - 4$ and passes through the origin.
$y = -\frac{1}{7}x$

16. The line is perpendicular to the line $y = -\frac{4}{3}x + 8$ and passes through the point (0, –2).
$y = \frac{3}{4}x - 2$

17. The line is parallel to the line $y = \frac{1}{3}x - 3$ and passes through the point (0, –8).
$y = \frac{1}{3}x - 8$

18. The line is perpendicular to the line $y = -6x + 1$ and passes through the point (0, 1).
$y = \frac{1}{6}x + 1$