Handout 1.2: Linear Functions and Slope-Intercept Form

Name: _____ **Date:** _____ **Per:** _____

Find the slope of the line through each pair of points.

1) $(-3, -2)$ and $(1, 6)$

2) $\left(\frac{1}{2}, \frac{2}{3}\right)$ and $\left(\frac{3}{2}, \frac{5}{3}\right)$

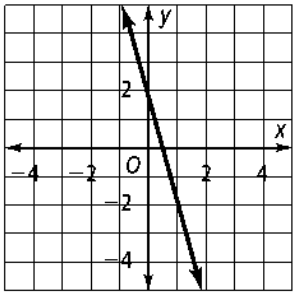
Find the slope and y-intercept of each line.

3) $y = -2$

4) $x = 5$

5) $3x - 4y = 12$

6)



7) $f(x) = \frac{5}{4}x + 7$

8) A) The equation $e = 1200 + 11t$ represents your elevation, e, in feet for each minute t you hike from a trail head. What does the slope represent in this situation? **Explain.**

_____

B) Are you hiking uphill or downhill? **Explain.**

_____

9) What is the slope of a vertical line? Explain.

_____

_____

Write an equation for each line in slope-intercept form.

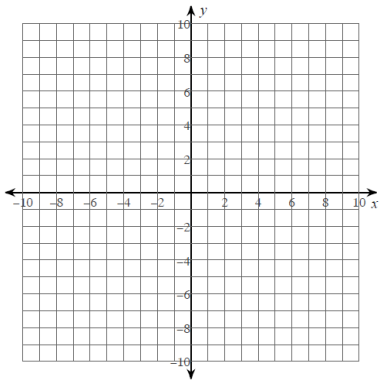
10) $m = -4$ and $y - int = 3$

11) $-3x + 2y = 7$

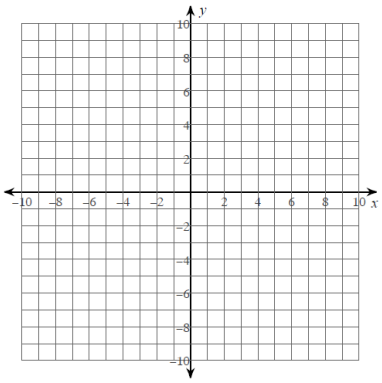
12) $-\frac{1}{2}x - y = 12$

Graph each equation.

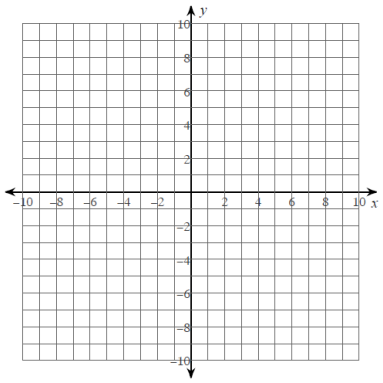
13) $y = \frac{2}{3}x - 1$



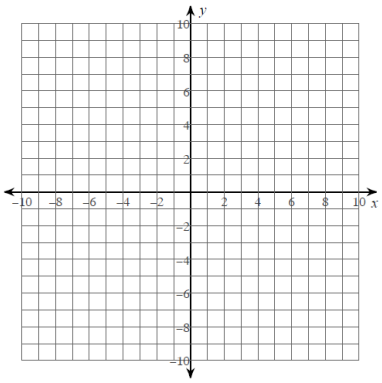
14) $y = -\frac{4}{3}x + 4$



15) $y = -2x + 2$



16) $4x - 5y = 20$



Write an equation in slope-intercept form for the line that satisfies each set of conditions.

17) Passes through $(3, -2)$ and parallel to $x = 7$

18) Parallel to $y = -x + 3$ with a y-intercept of 5.

19) Passes through $(0,10)$ and perpendicular to $2x - 3y = -3$	**20)** Passes through $(-6, -6)$, parallel to $y = \frac{4}{3}x + 8$
21) Passes through $(4, 2)$, perpendicular to $y = -2x + 3$	**22)** Passes through $(-7, 5)$ and parallel to $y = 7$
23) Perpendicular to $y = -\frac{1}{2}x + 7$ with a y-intercept of -3.	**24)** Pass through $(2, -5)$ and perpendicular to $y = 5$