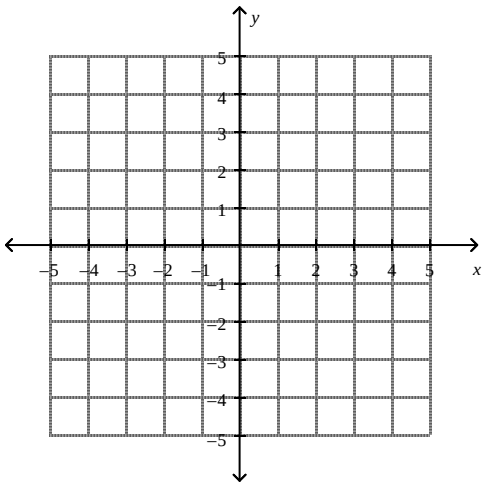
Name _____ Date _____ Period _____

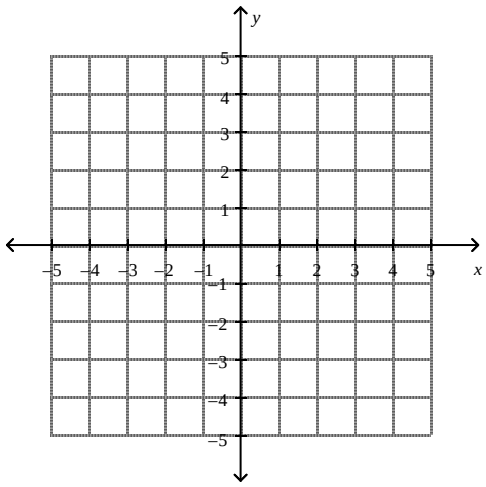
Unit 5 Lesson 2 **Slope-Intercept Form** **Practice**

Write the equation of the line whose slope and y-intercept is given. Then graph each equation.

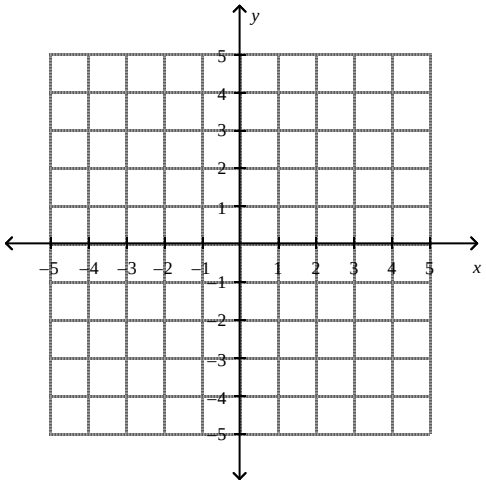
1) $S \quad = -2 \; y - in \quad = -1$



2) $S \quad = \frac{2}{5} \; y - in \quad = -5$



3) $S \quad = \frac{-3}{2} \; a \quad the \; li \quad p \quad thr \quad h \; the \; o$



Find the slope of the equation. *Then* write the equation in slope-intercept form.

4) $(3, -2) \; a \quad (0, 6)$

5) $(-4, 5) \; a \quad (0, 2)$

Solve each equation:

6) $5x - 7 + x = 19$

7) $3p + 10 = 5p - 7$

8) $12x + 10 = 2x + 5$

9) $5\frac{2}{3}x - 7\frac{5}{6} = 2\frac{1}{8}x + 3\frac{3}{4}$=

10) At sea level, the speed of sound in air is linearly related to the air temperature. If the temperature is 35℃, sound will travel at a rate of 352 meters per second. If the temperature is 0℃, sound will travel at a rate of 340 meters per second.

a) What two points are given to you in this situation?

b) Write the equation of the line in slope-intercept form.

c) How fast will sound travel if the temperature is 8℃?

11) A mountain climber is scaling a 400-foot cliff. The climber starts at the bottom at $t = 0$ and climbs at a constant rate of 124 feet/ hour.

a) Is this a linear function? How do you know?

b) What is the slope?

c) The y-intercept represents the height at which the climber begins scaling the cliff. What is the y-intercept in this situation?

d) Write the function for the distance, *d,* in feet that the climber climbs in terms of time, *t.* Use slope-intercept form.

e) Has the climber reached the top of the cliff after 3 hours? Explain.

f) If the climber left at 12:00, what time will he reach the top? Show work.