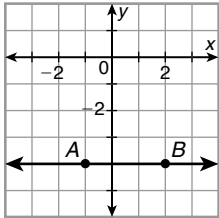## LESSON 3-5 Practice B
### Slopes of Lines

**Use the slope formula to determine the slope of each line.**



**1.** $\overleftrightarrow{AB}$ _____
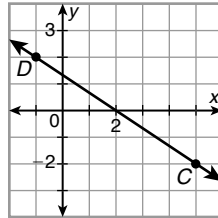


**2.** $\overleftrightarrow{CD}$ _____
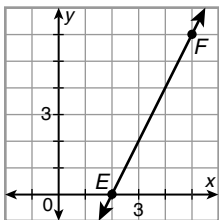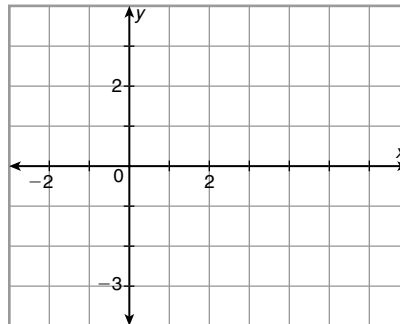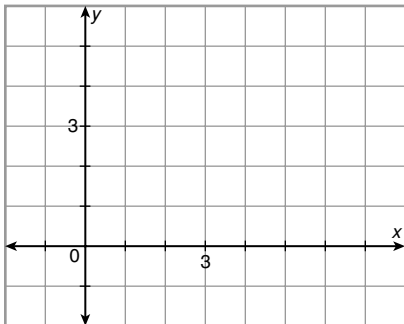


**3.** $\overleftrightarrow{EF}$ _____
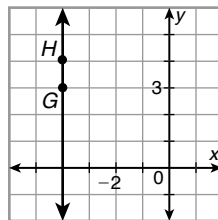


**4.** $\overleftrightarrow{GH}$ _____

**Graph each pair of lines. Use slopes to determine whether the lines are parallel, perpendicular, or neither.**





**5.** $\overleftrightarrow{IJ}$ and $\overleftrightarrow{KL}$ for $I(1, 0)$, $J(5, 3)$, $K(6, -1)$,

and $L(0, 2)$ _____

**6.** $\overleftrightarrow{PQ}$ and $\overleftrightarrow{RS}$ for $P(5, 1)$, $Q(-1, -1)$, $R(2, 1)$,

and $S(3, -2)$ _____

**7.** At a ski resort, the different ski runs down the mountain are color-coded according to difficulty. Green is easy, blue is medium, and black is hard. Assume that the ski runs below are rated only according to their slope (steeper is harder) and that there is one green, one blue, and one black run. Assign a color to each ski run.

Emerald $\left(m = \dfrac{4}{7}\right)$      Diamond $\left(m = \dfrac{5}{4}\right)$      Ruby $\left(m = \dfrac{5}{8}\right)$

_____      _____      _____

**Holt Geometry**

Name _____ Date _____ Class _____

## Practice B

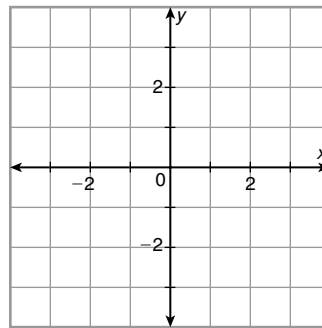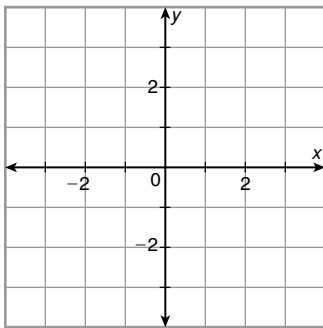*Lines in the Coordinate Plane*

**Write the equation of each line in the given form.**

**1.** the horizontal line through (3, 7) in point-slope form

**2.** the line with slope $-\frac{8}{5}$ through (1, −5) in point-slope form

_____

**3.** the line through $\left(-\frac{1}{2}, -\frac{7}{2}\right)$ and (2, 14) in slope-intercept form

**4.** the line with *x*-intercept −2 and *y*-intercept −1 in slope-intercept form

_____

**Graph each line.**



**5.** $y + 3 = \frac{3}{4}(x + 1)$



**6.** $y = -\frac{4}{3}x + 2$

**Determine whether the lines are parallel, intersect, or coincide.**

**7.** $x - 5y = 0,\ y + 1 = \frac{1}{5}(x + 5)$ _____

**8.** $2y + 2 = x,\ \frac{1}{2}x = -1 + y$ _____

**9.** $y = 4(x - 3),\ \frac{3}{4} + 4y = -\frac{1}{4}x$ _____

An *aquifer* is an underground storehouse of water. The water is in tiny crevices and pockets in the rock or sand, but because aquifers underlay large areas of land, the amount of water in an aquifer can be vast. Wells and springs draw water from aquifers.

**10.** Two relatively small aquifers are the Rush Springs (RS) aquifer and the Arbuckle-Simpson (AS) aquifer, both in Oklahoma. Suppose that starting on a certain day in 1985, 52 million gallons of water per day were taken from the RS aquifer, and 8 million gallons of water per day were taken from the AS aquifer. If the RS aquifer began with 4500 million gallons of water and the AS aquifer began with 3000 million gallons of water and no rain fell, write a slope-intercept equation for each aquifer and find how many days passed until both aquifers held the same amount of water. (Round to the nearest day.)

_____

**44** **Holt Geometry**

End Goal:  Write the equation (in point-slope form) for the perpendicular bisector of a segment with the given endpoints.

   a) First find the slope of the segment.
   b) Find the slope of the line perpendicular to the segment.
   c) Find the midpoint of the segment.
   d) Write the equation in point-slope form.

1.)  Endpoints are (5, -8) and (-2, 13)

2.)  Endpoints are (6,3) and (-4, -2)

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