

LESSON
3-6

Practice B
Lines in the Coordinate Plane

Write the equation of each line in the given form.

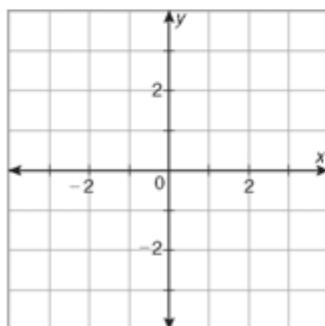
1. the horizontal line through (3, 7) in point-slope form

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

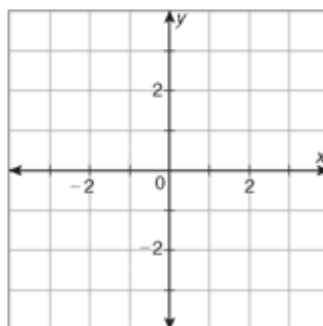
3. the line through $(-\frac{1}{2}, -\frac{7}{2})$ and (2, 14) in slope-intercept form

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.)
