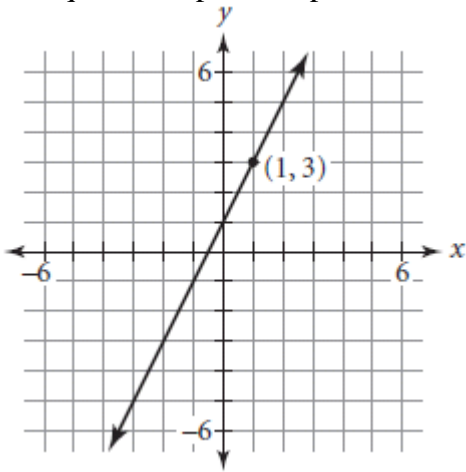
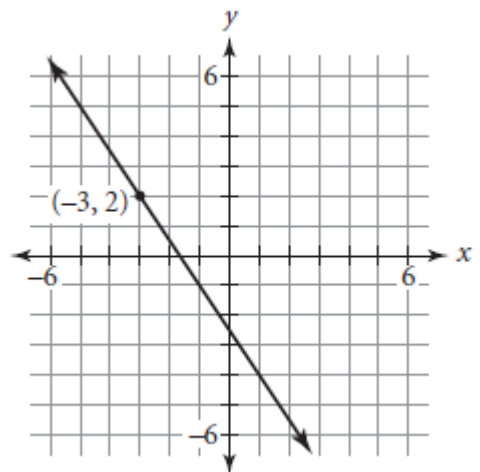


1. Write an equation in point-slope form for each line.

a.



b.



2. Write an equation in point-slope form for each line.

- Slope of 0.75 and passing through $(-4, 10)$
- Parallel to $y = 7 - 4x$ and passing through $(2, -5)$
- Perpendicular to $5y - x = 15$ and passing through $(2, -7)$
- Slope of $\frac{4}{5}$ with an x -intercept of $(-10, 0)$
- Parallel to $y = 2 + \frac{1}{3}(x + 5)$ through $(1, -2)$
- Passes through $(3, -8)$ and $(-6, 4)$

3. Solve for the indicated variable.

- $d = 9 - 4(t + 5)$ for d if $t = 20$
- $y = 500 - 20(x - 5)$ for x if $y = 240$
- $a_n = -3.5 + 0.4(n - 12)$ for n if $a_n = 2.9$

4. Find the value of w for which the slope of the line through $(w, -15)$ and $(2w - 1, -29)$ is $\frac{-7}{2}$.

5. In a region of northeastern Montana, it is determined that there were 45 coyotes in 2010. It is estimated that the population will increase by 4 each year thereafter.

- Write a linear equation to model this situation.
- Predict how many coyotes there will be in 2020.