NAME _____ DATE _____ PERIOD _____

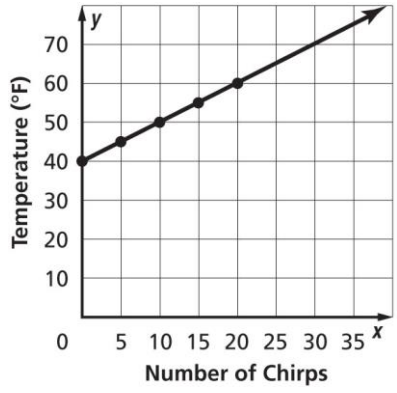
4-2 Word Problem Practice

Writing Equations in Standard and Slope-Intercept Form

1. BICYCLING Harvey rides his bike at an average speed of 12 miles per hour. In other words, he rides 12 miles in 1 hour, 24 miles in 2 hours, and so on. Let h be the number of hours he rides and d be distance traveled. Write an equation for the relationship between distance and time in point-slope form.

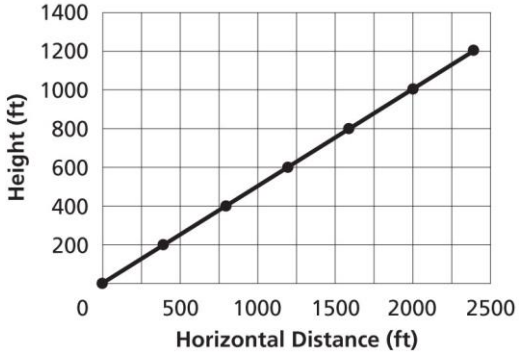
2. GEOMETRY The perimeter of a square varies directly with its side length. The point-slope form of the equation for this function is $y - 4 = 4(x - 1)$. Write the equation in standard form.

3. NATURE The frequency of a male cricket's chirp is related to the outdoor temperature. The relationship is expressed by the equation $T = n + 40$, where T is the temperature in degrees Fahrenheit and n is the number of chirps the cricket makes in 14 seconds. Use the information from the graph below to write an equation for the line in point-slope form.



4. CANOEING Geoff paddles his canoe at an average speed of 3.5 miles per hour. After 5 hours of canoeing, Geoff has traveled 18 miles. Write an equation in point-slope form to find the total distance y for any number of hours x.

5. AVIATION A jet plane takes off and consistently climbs 20 feet for every 40 feet it moves horizontally. The graph shows the trajectory of the jet.



a. Write an equation in point-slope form for the line representing the jet's trajectory.

b. Write the equation from part **a** in slope -intercept form.

c. Write the equation in standard form.