39. ♦ **TAKS REASONING** An emergency cell phone charger requires you to turn a small crank in order to create the energy needed to recharge the phone's battery. If you turn the crank 120 times per minute, the total number r of revolutions that you turn the crank is given by

$$r = 120t$$

where t is the time (in minutes) spent turning the crank.

   a. Graph the function and identify its domain and range.

   b. Identify the domain and range if you stop turning the crank after 4 minutes. *Explain* how this affects the appearance of the graph.

40. ◆ **MULTIPLE REPRESENTATIONS** The National Weather Service releases weather balloons twice daily at over 90 locations in the United States in order to collect data for meteorologists. The height h (in feet) of a balloon is a function of the time t (in seconds) after the balloon is released, as shown.

   a. Making a Table Make a table showing the height of a balloon after t seconds for $t = 0$ through $t = 10$.

   b. Drawing a Graph A balloon bursts after a flight of about 7200 seconds. Graph the function and identify the domain and range.

$h = 14t + 5$
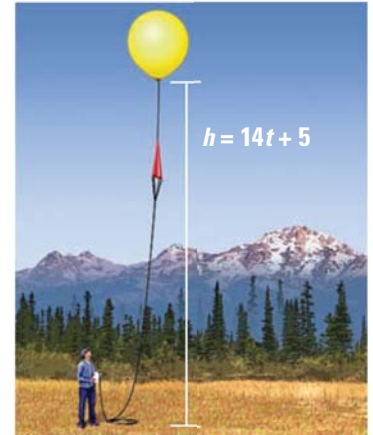
41. ♦ **TAKS REASONING** Students can pay for lunch at a school in one of two ways. Students can either make a payment of $30 per month or they can buy lunch daily for $2.50 per lunch.

   a. Graph Graph the function $y = 30$ to represent the monthly payment plan. Using the same coordinate plane, graph the function $y = 2.5x$ to represent the daily payment plan.

   b. CHALLENGE What are the coordinates of the point that is a solution of both functions? What does that point mean in this situation?

   c. CHALLENGE A student eats an average of 15 school lunches per month. How should the student pay, daily or monthly? *Explain*.

MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

42. ♦ **TAKS PRACTICE** A plumber charges $64 per hour to do repair work and an additional $92 for replacement parts. If the bill totals $284, how many hours did the plumber work? *TAKS Obj. 4*

   (A) 1.5 h   **(B)** 2 h   **(C)** 2.5 h   **(D)** 3 h

43. ♦ **TAKS PRACTICE** A specific shade of orange paint requires 3 parts red paint for every 4 parts yellow paint. A painter is mixing that shade of orange and uses 6 ounces of red paint and 2 tubes of yellow paint. How many ounces of paint are in one tube of yellow paint? *TAKS Obj. 9*

   (F) $\frac{8}{3}$ oz   **(G)** 4 oz   **(H)** 6 oz   **(J)** 8 oz

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