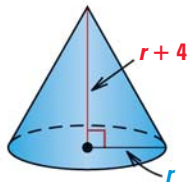
44. FUNDRAISER You are organizing a school fundraiser that involves selling holiday cookies and decorative calendars. You want to raise $2400. You charge $2 for a bag of cookies and $7 for a calendar. Write and graph an equation to represent the situation. If you sell 200 calendars, how many bags of cookies do you need to sell in order to meet your goal? *(p. 98)*

45. GEOMETRY A designer is creating a kit for making sand castles. The designer wants one of the molds to be a cone that will hold 75π cubic inches of sand. What should the dimensions of the cone be if the height should be 4 inches more than the radius of the base? *(p. 370)*



46. ELECTRICITY The current I (in amperes) required for an electrical appliance is given by $I = \sqrt{\frac{P}{R}}$ where P is the power (in watts) and R is the resistance (in ohms). Find the power consumed by a portable hair dryer for which $I = 17$ amperes and $R = 6.5$ ohms. *(p. 452)*

47. DEPRECIATION Rachel buys a new car for $18,600. The value of the car decreases by 15.5% each year. Estimate when the car will have a value of $8000. *(p. 486)*

48. GEOMETRY Steve is a lifeguard at a pond. The pond is approximately circular in shape with a diameter of 330 feet. He ropes off a section of the pond for swimming. The rope forms a chord of the circle and is a maximum distance of 50 feet from the edge of the pond. What is the length of the rope? *(p. 626)*

49. DINING OUT You and three friends go to a restaurant for dinner. There are 20 different items on the menu. Each of you is equally likely to order any item. What is the probability that each of you orders a different item from the menu? *(p. 717)*

50. REAL ESTATE COMMISSIONS The data set below gives the selling prices of seven homes that are being sold by one real estate agent. The agent will receive 5% of the selling price of each home as a commission. *(pp. 744, 751)*

Selling Prices of Homes
$201,900; $205,200; $195,800; $210,300; $199,900; $215,500; $192,100

a. Find the mean, median, mode, range, and standard deviation of the data.

b. Find the agent's commission for each home. Then find the mean, median, mode, range, and standard deviation of the commissions.

c. *Compare* the statistics from parts (a) and (b).

51. SALARY An accountant takes a job that pays an annual salary of $31,000 for the first year. The employer offers a $1600 raise for each of the next 8 years. Write a rule for the accountant's salary in the nth year. What will the accountant's salary be in the 9th year? *(p. 802)*