47. BIOLOGY Four years after a hedge maple tree was planted, its height was 9 feet. Eight years after it was planted, the hedge maple tree's height was 12 feet. What is the growth rate of the hedge maple? What was its height when it was planted?

TEXAS @HomeTutor for problem solving help at classzone.com

48. TECHNOLOGY You have a subscription to an online magazine that allows you to view 25 articles from the magazine's archives. You are charged an additional fee for each article after the first 25 articles viewed. After viewing 28 archived articles, you paid a total of $34.80. After viewing 30 archived articles, you paid a total of $40.70.

   a. What is the cost per archived article after the first 25 articles viewed?

   b. What is cost of the magazine subscription?

TEXAS @HomeTutor for problem solving help at classzone.com

49. TAKS REASONING You are cooking a roast beef until it is well-done. You must allow 30 minutes of cooking time for every pound of beef, plus some extra time. The last time you cooked a 2 pound roast, it was well-done after 1 hour and 25 minutes. How much time will it take to cook a 3 pound roast? *Explain* how you found your answer.

50. TELEPHONE SERVICE The annual household cost of telephone service in the United States increased at a relatively constant rate of $27.80 per year from 1981 to 2001. In 2001 the annual household cost of telephone service was $914.

   a. What was the annual household cost of telephone service in 1981?

   b. Write an equation that gives the annual household cost of telephone service as a function of the number of years since 1981.

   c. Find the household cost of telephone service in 2000.

51. NEWSPAPERS Use the information in the article about the circulation of Sunday newspapers.

   a. About how many Sunday newspapers were in circulation in 1970?

   b. Write an equation that gives the number of Sunday newspapers in circulation as a function of the number of years since 1970.

   c. About how many Sunday newspapers were in circulation in 2000?

> **Sunday Edition C9**
>
> **SUNDAY PAPERS INCREASE**
> **From 1970 to 2000,** the number of Sunday newspapers in circulation increased at a relatively constant rate of 11.8 newspapers per year. In 1997 there were 903 Sunday newspapers in circulation.

52. AIRPORTS From 1990 to 2001, the number of airports in the United States increased at a relatively constant rate of 175 airports per year. There were 19,306 airports in the United States in 2001.

   a. How many U.S. airports were there in 1990?

   b. Write an equation that gives the number of U.S. airports as a function of the number of years since 1990.

   c. Find the year in which the number of U.S. airports reached 19,500.

○ = **WORKED-OUT SOLUTIONS**
on p. WS1

= **TAKS PRACTICE AND REASONING**

◆ = **MULTIPLE REPRESENTATIONS**