41. ★ **EXTENDED RESPONSE** In 2000, the average price of a football ticket for a Minnesota Viking's game was $48.28. During the next 4 years, the price increased an average of 6% each year.

a. Write a model giving the average price p (in dollars) of a ticket t years after 2000.

b. Graph the model. Estimate the year when the average price of a ticket was about $60.

c. *Explain* how you can use the graph of $p(t)$ to determine the minimum and maximum t-values in the domain for which the function gives meaningful results.

42. ◆ **MULTIPLE REPRESENTATIONS** In 1977, there were 41 breeding pairs of bald eagles in Maryland. Over the next 24 years, the number of breeding pairs increased by about 8.9% each year.

a. **Writing an Equation** Write a model giving the number n of breeding pairs of bald eagles in Maryland t years after 1977.

b. **Making a Table** Make a table of values for the model.

c. **Drawing a Graph** Graph the model.

d. **Using a Graph** About how many breeding pairs of bald eagles were in Maryland in 2001?

43. **REASONING** Is investing $3000 at 6% annual interest and $3000 at 8% annual interest equivalent to investing $6000 (the total of the two principals) at 7% annual interest (the average of the two interest rates)? *Explain*.

44. **CHALLENGE** The yearly cost for residents to attend a state university has increased from $5200 to $9000 in the last 5 years.

a. To the nearest tenth of a percent, what has been the average annual growth rate in cost?

b. If this growth rate continues, what will the cost be in 5 more years?

MIXED REVIEW FOR TAKS

REVIEW
Lesson 4.2;
TAKS Workbook

45. ★ **TAKS PRACTICE** What is the effect on the graph of the equation $y = x^2 - 2$ when it is changed to $y = x^2 + 8$? *TAKS Obj. 5*

Ⓐ The graph is translated 10 units up.

Ⓑ The graph is translated 10 units down.

Ⓒ The graph is translated 10 units to the right.

Ⓓ The graph is translated 10 units to the left.

REVIEW
Lesson 13.2;
TAKS Workbook

46. ★ **TAKS PRACTICE** What is the approximate length of arc AB? *TAKS Obj. 8*

Ⓕ 5.3 cm   Ⓖ 8.4 cm

Ⓗ 16.8 cm   Ⓙ 33.5 cm