47. CONTESTS You currently have 450 points in an academic contest. You choose the value p of the question you want to answer. The value p represents the absolute deviation of your new score s from 450.

a. Write an absolute value equation that gives p in terms of s.

b. If you choose a question worth 150 points, what are the possible new scores that you can have after answering the question?

48. TAKS REASONING The percent p of United States residents who were foreign born, or born outside of the United States, during the period 1910–2000 can be modeled by the equation $p = 0.165|t - 60| + 4.8$ where t is the number of years since 1910.

a. Approximate During the period 1910–2000, in approximately what year did foreign-born residents account for 13% of all residents?

b. Predict If the model holds for years after 2000, predict the year in which foreign-born residents will again account for 13% of all residents.

c. Decide According to the model, did foreign-born residents account for 4% of all residents at any time during the period 1910–2000? *Explain* your answer.

49. TAKS REASONING A stock's average price p (in dollars) during the period February 2005 to October 2005 can be modeled by the equation $p = 2.3|m - 7| + 9.57$ where m is the number of months since February 2005.

a. Approximate In approximately what month and year was the average price \$16.15? If the model holds for months after October 2005, predict the month and year in which the average price will again be \$16.15.

b. Justify Is it possible to use the model to estimate the stock's lowest average price during this period? *Justify* your answer.

50. CHALLENGE In a recent Olympics, swimmers in a men's 200 meter butterfly event finished with times from 1 minute 54.04 seconds to 1 minute 57.48 seconds. Let t represent the slowest or fastest time (in seconds). Write an absolute value equation that describes the situation.

MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

REVIEW
Lesson 4.3;
TAKS Workbook

51. TAKS PRACTICE What are the x- and y-intercepts of the graph of the function $2x - 3y = 6$? *TAKS Obj. 3*

Ⓐ (2, 0) and (0, −3) Ⓑ (−2, 0) and (0, 3)

Ⓒ (−3, 0) and (0, −2) Ⓓ (3, 0) and (0, −2)

REVIEW
TAKS Preparation p. 836;
TAKS Workbook

52. TAKS PRACTICE A rectangular prism with a volume of 50 cm^3 has length ℓ, width w, and height h. A second rectangular prism has length 3ℓ, width $2w$, and height $\frac{h}{2}$. What is the volume of the second prism? *TAKS Obj. 8*

Ⓕ 100 cm^3 Ⓖ 150 cm^3 Ⓗ 300 cm^3 Ⓙ 600 cm^3