49. CHALLENGE A widescreen television image has a width w and a height h that satisfy the inequality $\frac{w}{h} > \frac{4}{3}$.

   a. Does the television screen shown at the right meet the requirements of a widescreen image?

   b. Let d be the length of a diagonal of a television image. Write an inequality describing the possible values of d and h for a widescreen image.


16.5 in.

27.4 in.

MIXED REVIEW FOR TAKS

50. ⬥ **TAKS PRACTICE** Which equation represents the line that passes through the points (1, 4) and (5, −2)? *TAKS Obj. 3*

  Ⓐ $y = -\frac{2}{3}x + \frac{14}{3}$ **Ⓑ** $y = \frac{2}{3}x + \frac{10}{3}$

  Ⓒ $y = -\frac{3}{2}x + \frac{11}{2}$ **Ⓓ** $y = \frac{3}{2}x + \frac{5}{2}$

51. ⬥ **TAKS PRACTICE** The map shows two different paths from the library to the cafeteria. How many meters shorter is the walk along the sidewalk than the walk on the covered walkway? *TAKS Obj. 8*

library

sidewalk

109 m

91 m

cafeteria

covered walkway

covered walkway

  Ⓕ 18 m   **Ⓖ** 42 m
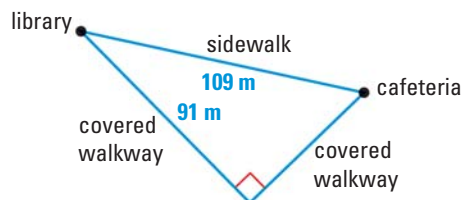
  Ⓗ 50 m   **Ⓙ** 60 m

QUIZ *for Lessons 2.7–2.8*

Graph the function. *Compare* **the graph with the graph of** $y = |x|$. *(p. 123)*

  1. $y = |x + 7| + 4$ **2.** $y = -2|x + 10| - 1$ **3.** $f(x) = \frac{1}{2}|x - 1| - 5$

Write an equation of the graph. *(p. 123)*

4.

5.

6.

Graph the inequality in a coordinate plane. *(p. 132)*

  7. $y > -2$ **8.** $y \le 3x + 1$ **9.** $2x - 5y \ge 10$

10. MINI-CARS You have a 20 credit gift pass to a mini-car raceway. It takes 2 credits to drive the cars on the Rally track and 3 credits to drive the cars on the Grand Prix track. Write and graph an inequality describing how many times you can race on the two tracks using your gift pass. Then give three possible solutions. *(p. 132)*