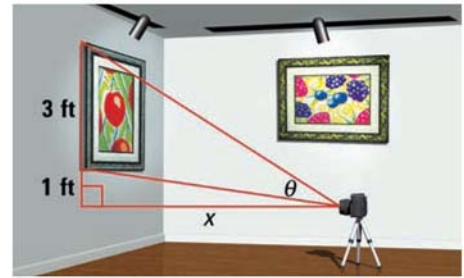


40. **CHALLENGE** You want to photograph a painting with a camera mounted on a tripod. The painting is 3 feet tall, and the bottom of the painting is 1 foot above the camera lens, as shown. How far should the camera be positioned from the wall in order to have the largest possible viewing angle θ when you take the photograph? (*Hint: Write an equation for θ in terms of x only, and then use a graphing calculator to find the value of x that maximizes θ .*)



MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

REVIEW

Lesson 2.3;
TAKS Workbook

41. **TAKS PRACTICE** The graph of which linear equation has a slope of $-\frac{2}{5}$?

TAKS Obj. 3

(A) $-5x - 2y = -15$

(B) $2x - 5y = -15$

(C) $2x + 5y = -15$

(D) $5x + 2y = -15$

REVIEW

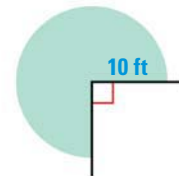
42. **TAKS PRACTICE** Steve plants a flower bed next to a corner of a building. The flower bed forms part of a circle with a radius of 10 feet. What is the flower bed's approximate area? **TAKS Obj. 8**

(F) 47.1 ft^2

(G) 78.5 ft^2

(H) 226.9 ft^2

(J) 235.6 ft^2



QUIZ for Lessons 13.3–13.4

Use the given point on the terminal side of an angle θ in standard position to evaluate the six trigonometric functions of θ . (p. 866)

1. (6, -2)

2. (-7, 5)

3. (4, 8)

4. (-12, -3)

Evaluate the expression without using a calculator. (p. 866)

5. $\cos 150^\circ$

6. $\tan \frac{8\pi}{3}$

7. $\sin (-840^\circ)$

8. $\sec \left(-\frac{15\pi}{4}\right)$

Evaluate the expression without using a calculator. Give your answer in both radians and degrees. (p. 875)

9. $\cos^{-1} \left(-\frac{\sqrt{2}}{2}\right)$

10. $\sin^{-1} (-1)$

11. $\tan^{-1} \frac{\sqrt{3}}{3}$

12. $\cos^{-1} \frac{1}{2}$

Solve the equation for θ . (p. 875)

13. $\sin \theta = 0.3$; $90^\circ < \theta < 180^\circ$

14. $\tan \theta = 6$; $180^\circ < \theta < 270^\circ$

15. $\cos \theta = -0.72$; $90^\circ < \theta < 180^\circ$

16. $\sin \theta = -0.55$; $270^\circ < \theta < 360^\circ$

17. **ACROBATICS** A stuntman uses a 30 foot rope to swing 136° between two platforms of equal height, grazing the ground in the middle of the swing. If the rope stays taut throughout the swing, how far above the ground was the stuntman at the beginning and the end of the swing? How far apart are the two platforms? (p. 875)

