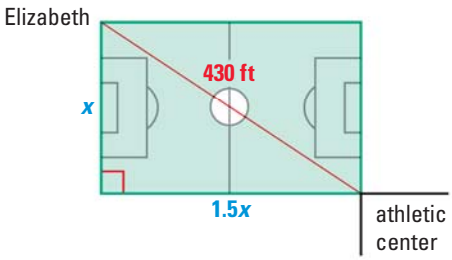
4 TAKS PRACTICE

PRACTICE FOR TAKS OBJECTIVES 6 AND 8

1. Elizabeth walks diagonally across a soccer field to the athletic center. The length of the field is 1.5 times the width of the field. The diagonal length across the field is 430 feet. About how many feet does Elizabeth save by walking diagonally across the soccer field instead of walking along the perimeter of the field?



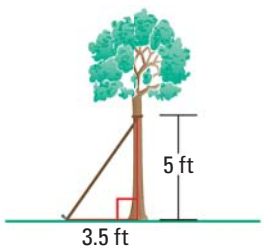
A 47 ft

B 166 ft

C 238 ft

D 287 ft

2. Nate wants to support a recently planted tree using rope. He attaches the rope to the tree 5 feet above the ground and 3.5 feet from the base of the tree, as shown. About how many feet of rope does Nate need to support the tree?



F 2.9 ft

G 6.1 ft

H 8.5 ft

J 37.3 ft

3. What is the volume of a cylindrical vase with a radius of 2 inches and a height of 12 inches?

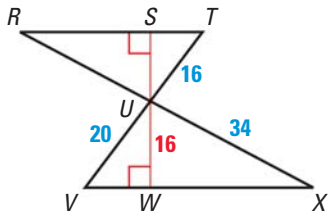
A 24π in.^{3}

B 48π in.^{3}

C 144π in.^{3}

D 288π in.^{3}

4. In the diagram, $\overline{RT}$ and $\overline{VX}$ are parallel. What is the length of altitude $\overline{US}$?



F 9.6 units

G 10.7 units

H 12.8 units

J 20.0 units

5. The cross section of the roof of a birdhouse is shaped like an equilateral triangle with a side length of 7 inches. The box that the roof is placed on to create the birdhouse is 8 inches tall. Approximately how many inches is the total height of the birdhouse?

A 6.1 in.

B 11.5 in.

C 14.1 in.

D 15.0 in.

MIXED TAKS PRACTICE

6. What are the x-intercepts of the graph of the equation $y = x^2 - x - 30$? *TAKS Obj. 5*

F $x = 5, x = 6$

G $x = -5, x = 6$

H $x = 5, x = -6$

J $x = -5, x = -6$

7. What is the solution of the equation $3z - 2 + 4z = 2z + 13$? *TAKS Obj. 2*

A -5

B -3

C 3

D 5