

Florida Geometry
Chapter 8 - Sunshine State Standards Practice Solutions

I. sine

II. similar

III. consecutive

IV. ratio

1. A

First use the tangent ratio to solve for x :

$$\tan 32^\circ = \frac{8 \text{ cm}}{x}$$

$$x = \frac{8 \text{ cm}}{\tan 32^\circ}$$

$$x \approx 12.8 \text{ cm}$$

The area of the rectangle is therefore

$$bh = (8 \text{ cm})(12.8 \text{ cm}) \approx 102 \text{ cm}^2.$$

3. B

Let x be the distance from the base of the building to the edge of the parking lot. Use the tangent ratio to solve for x :

$$\tan 48^\circ = \frac{45 \text{ ft}}{x}$$

$$x = \frac{45 \text{ ft}}{\tan 48^\circ}$$

$$x \approx 40.5 \text{ ft}$$

5. B

Opposite sides of a parallelogram are congruent. So,

$$3x - 10 = x + 2$$

$$2x = 12$$

$$x = 6$$

$$6y - 55 = 15 - y$$

$$7y = 70$$

$$y = 10$$

6. H

$m\angle T = 180 - (72 + 55) = 180 - 127 = 53$. The side opposite $\angle T$,

\overline{HQ} , is the smallest side. The side opposite $\angle Q$, \overline{HT} , is the

next smallest side. The side opposite $\angle H$, \overline{TQ} , is the largest side.

8. G

The 2 parts of the new route and the old route form an isosceles

right triangle. So, the hypotenuse is $\sqrt{2} \text{ mi} \approx 1.41 \text{ mi}$. The

difference is therefore $1 \text{ mi} + 1 \text{ mi} - 1.4 \text{ mi} = 0.59 \text{ mi}$.