

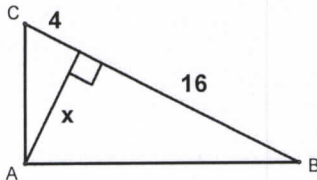
Chapter 8 Review

Target: Use the three trig functions to solve problems.

Warm-Up

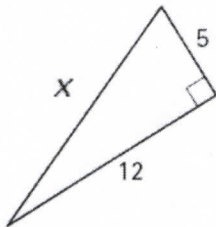
1. Find the geometric mean of 4 and 25.

2. Find x in $\triangle ABC$.



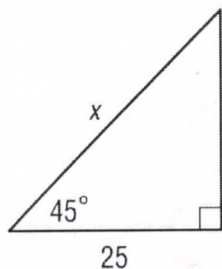
$$\frac{4}{x} = \frac{x}{16}$$
$$\sqrt{x^2} = \sqrt{64}$$
$$x = 8$$

3. Solve for x .



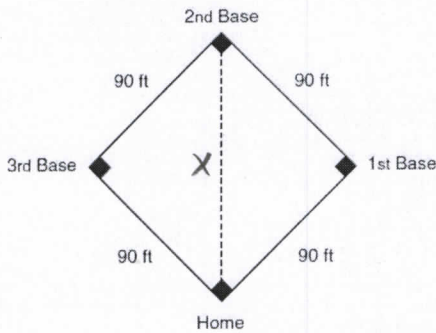
$$5^2 + 12^2 = x^2$$
$$25 + 144 = x^2$$
$$\sqrt{169} = \sqrt{x^2}$$
$$x = 13$$

4. Find the value of x . (use 45-45-90 right triangles)



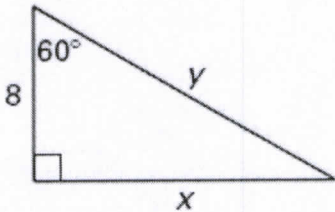
$$x = 25\sqrt{2}$$

5. A baseball diamond is in the shape of a square, 90 feet on a side. What is the direct distance from home plate to second base?



$$x = 90\sqrt{2}$$

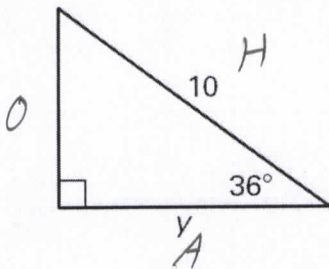
6. Find the value of each variable using the special right triangle theorems. Write your answers in simplified radical form. (Use 30-60-90 right triangles)



$$x = 8\sqrt{3}$$

$$y = 16$$

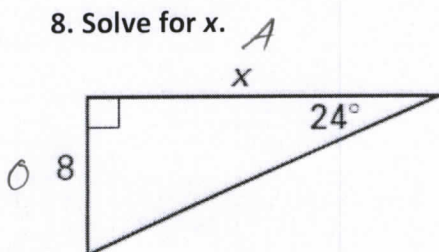
7. Solve for y.



$$\cos 36 = \frac{y}{10} \cdot 10$$

$$y = 8.09$$

8. Solve for x.

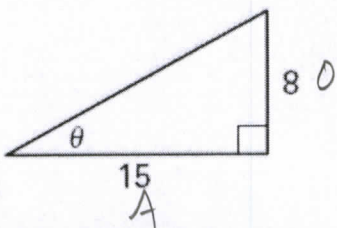


$$\tan 24 = \frac{8}{x}$$

$$x = \frac{8}{\tan 24}$$

$$x = 17.97$$

9. Solve for $m\angle\theta$.



$$\tan \theta = \frac{8}{15}$$

$$\theta = 28.07^\circ$$