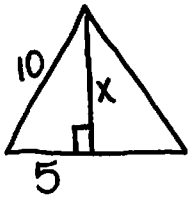## Review on Pythagorean Theorem

Name **Key** _____ Class Perioed_____
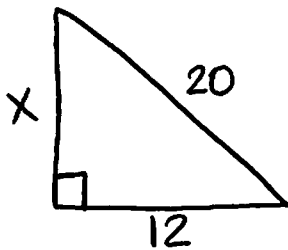
Draw a picture and solve the following word problems.

1. **What is the length of the altitude of an equilateral triangle if a side is 10 in? Round to the nearest tenth.**

$$X^2 + 5^2 = 10^2$$
$$X^2 + 25 = 100$$
$$X^2 = 75$$

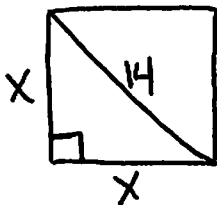$$\boxed{X = 5\sqrt{3} \text{ in } \text{ or } 8.7 \text{ in}}$$

2. **A 20 foot ladder is leaning against a building. The foot of the ladder is 12 feet from the base of the building. How high is the top of the ladder along the building? Round to the nearest tenth.**

$$X^2 + 12^2 = 20^2$$
$$X^2 + 144 = 400$$
$$X^2 = 256$$

$$\boxed{X = 16 \text{ feet}}$$

3. **A square has a diagonal with length of 14 cm. What is the measure of each side? Round to the nearest tenth.**

$$X^2 + X^2 = 14^2$$
$$2X^2 = 196$$
$$X^2 = 98$$

$$\boxed{X = 7\sqrt{2} \text{ cm } \text{ or } 9.9 \text{ cm}}$$