

**SHOW WORK.**

**Give exact answers in simplest form (no decimals). Do not use trigonometry.**

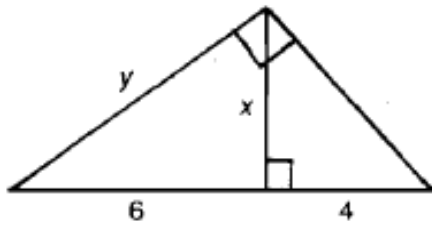
1. Find the geometric mean between 15 and 10.

2. Is the triangle acute, right, or obtuse?

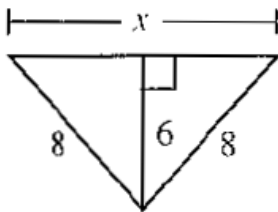
a) sides 5, 10, 12

b) sides 7, 24, 25

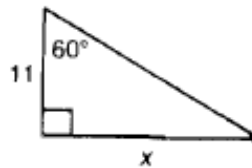
3. Find  $x$  and  $y$ .



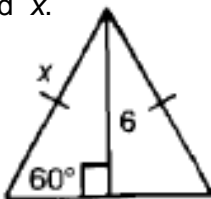
4. Find  $x$ .



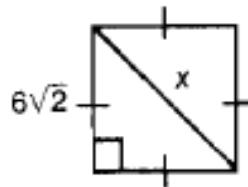
5. Find  $x$ .



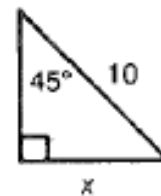
6. Find  $x$ .



7. Find  $x$ .

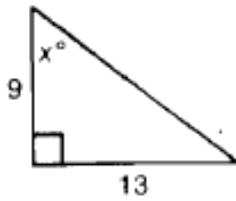


8. Find  $x$ .

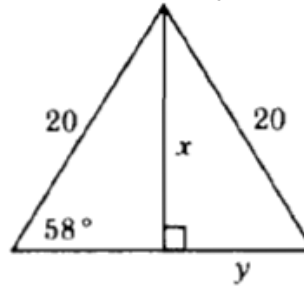


Use trigonometry to solve each problem. Round answers to the nearest tenth.

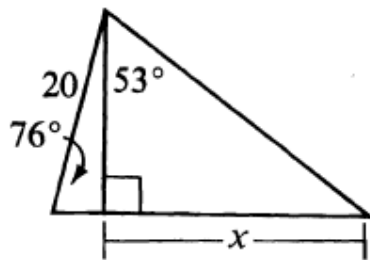
9. Find  $x$ .



10. Find  $x$  and  $y$ .



11. Find  $x$ .



12. A ladder that is 20 ft long is leaning against the side of a building. If the angle formed between the ladder and the ground is  $75^\circ$ , how far is the bottom of the ladder from the base of the building?

13. A person in a lighthouse 22 m above sea level sights a buoy in the water. If the angle of depression to the buoy is  $25^\circ$ , how far from the base of the lighthouse is the buoy?

