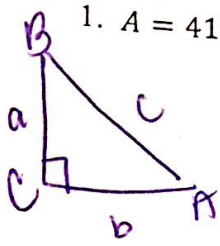
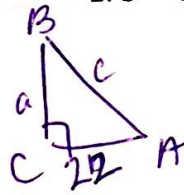


Practice - Solve each right triangle. Round lengths to two decimal places and angles to one decimal place. Assume angle C is the right angle.



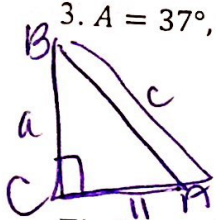
1. $A = 41^\circ, b = 7.44$

$B = 49^\circ$
 $a = 6.47$
 $c = 9.86$



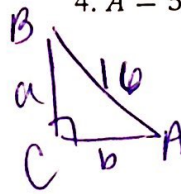
2. $b = 22, A = 22^\circ$

$B = 68^\circ$
 $a = 8.89$
 $c = 23.73$



3. $A = 37^\circ, b = 11$

$B = 53^\circ$
 $a = 8.29$
 $c = 13.77$

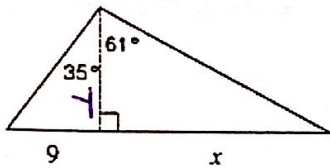


4. $A = 55^\circ, c = 16$

$B = 35^\circ$
 $a = 9.18$
 $b = 13.12$

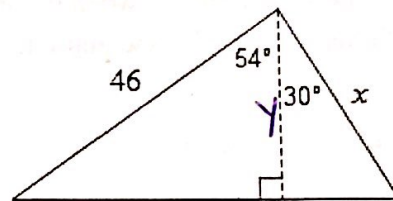
Find the missing side. Show all work.

5.



$y = 12.85$
 $x = 23.19$

6.



$y = 27.04$
 $x = 31.22$

Draw the right triangle and solve the problem. Show all work.

7. Mrs. James is using a 6-meter ladder to clean the windows on her second floor. Her ladder stands on level ground and rests against the side of her house at a point 4 meters from the ground. How far from the side of her house is the foot of the ladder?

4.47 ft

8. The Washington Monument is 169.29 meters tall and, at a particular time, casts a shadow 201.2 meters long. Find the approximate angle of elevation of the sun at the time.

40.08°

9. Find the length of a guy wire that makes an angle of 45° with the ground if the wire is attached to the top of the tower 63 meters high.

89.1 m

10. Suppose the angle of elevation of the sun is 23.4° . Find the length of the shadow cast by Cindy Newman, who is 5.75 feet tall.

$$13.29 \text{ ft}$$

11. Find the angle of elevation of the sun if a 48.6 ft flagpole casts a shadow 63.1 ft long.

$$37.6^\circ$$

12. The angle of depression from the top of a building to a point on the ground is 32° . How far is the point on the ground from the top of the building if the building is 252 meters high?

$$403.28 \text{ m}$$

13. An airplane is flying 10,500 feet above the level ground. The angle of depression from the plane to the base of a tree is 13° . How far **horizontally** must the plane fly to be directly over the tree.

$$45,480.5 \text{ ft}$$

14. The angle of elevation from the top of a small building to the top of a nearby taller building is 46° , while the angle of depression to the bottom is 14° . If the smaller building is 28 meters high, find the height of the taller building.

$$144.29 \text{ ft}$$

15. You are standing on level ground 800 feet from Mt. Rushmore, looking at the sculpture of Abraham Lincoln's face. The angle of elevation to the bottom of the sculpture is 32° and the angle of elevation to the top is 35° . Find the height of the sculpture of Lincoln's face to the nearest tenth of a foot.

$$125.13 \text{ ft}$$