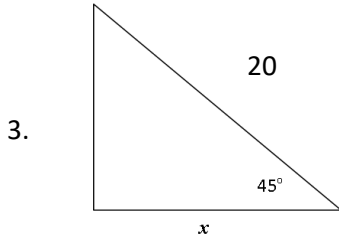
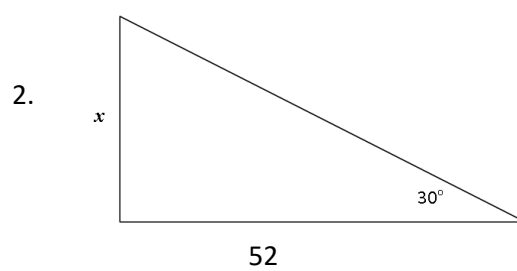
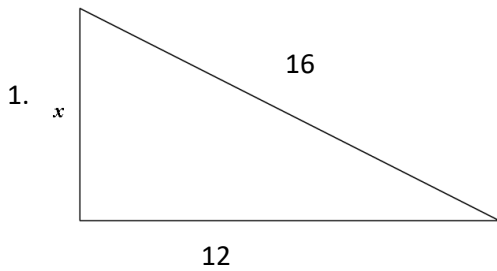


Section 1: Find the length of the missing side. Give exact values only (no decimal approximations).

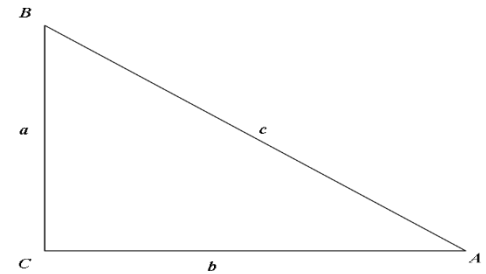


4. Find the length of the diagonal of a square with sides 19 cm.

**Section 2: Given the following right triangle,
Find the indicated missing value.
Round all answers to the nearest tenth.**

5. $A = 35^\circ$, $b = 9$, find a .

6. $A = 63^\circ$, $c = 25$, find b .



7. $B = 43^\circ$, $b = 21$, find c .

8. $b = 14$, $c = 26$, find angle B .

9. $a = 9$, $c = 17$, find angle B .

10. $b = 37$, $a = 21$, find angle A .

Section 3: Applications. Solve the problem for the requested quantity. Show all work.

Round answers to the nearest hundredth unit.

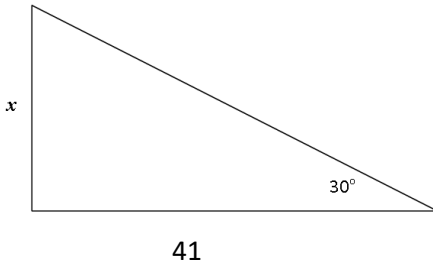
11. A 5.5 foot woman is standing in the sun. Her shadow is 13 feet long. What is the angle of elevation of the sun?

12. A 26-foot extension ladder is placed against the wall of a building making an angle with the ground of 52° .
How far up the wall does the ladder touch?

13. A person is looking down from a 100 foot cliff at a boat out on the ocean. If the angle of depression from the person to the boat is 61° , how far out is the boat?

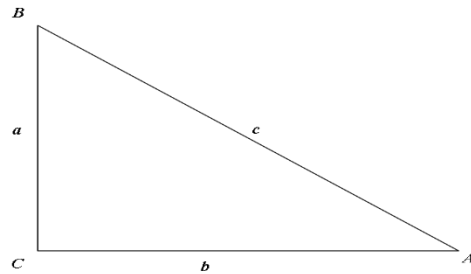
Section 1: Find the length of the missing side. Give exact values only (no decimal approximations).

1.



2. Find the length of the sides of a square with diagonal of 42 cm.

**Section 2: Given the following right triangle,
Find the indicated missing value.
Round all answers to the nearest tenth.**

3. $A = 55^\circ$, $b = 84$, find a .4. $a = 16$, $c = 57$, find Angle B .

Section 3: Applications. Solve the problem for the requested quantity. Show all work.

Round answers to the nearest hundredth unit.

5. A 6.5 foot man is standing in the shadow of a flagpole 18 feet from its base. His shadow is 11.5 feet long. How tall is the flag pole?