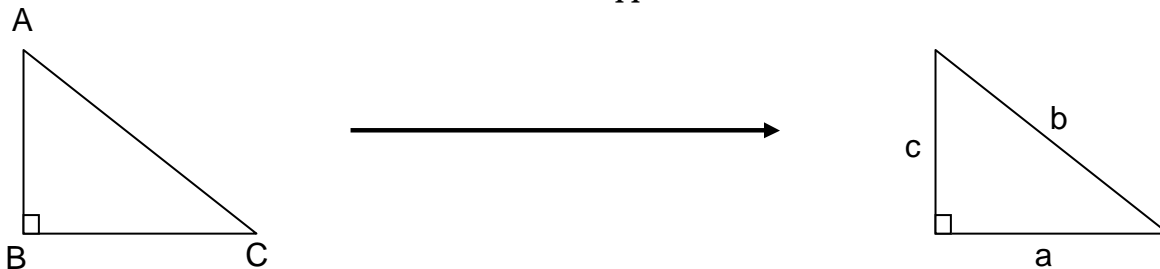


Notation: In any triangle, the vertices are named using capital letters as in the given example. The *lengths of the sides* are named using lower case letters that match the *opposite vertex*.



Example: In the diagrams below, fill in the missing information.



Solving Right Triangles

To solve a right triangle requires that you find the “missing” three pieces of information.

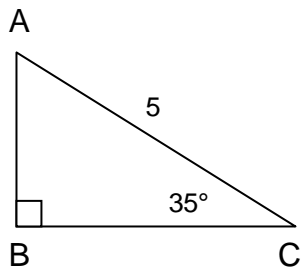
The strategy to solve a right triangle will require:

1. The Pythagorean Theorem
2. The Sum of the Angles in a Triangle Theorem
3. Trigonometry

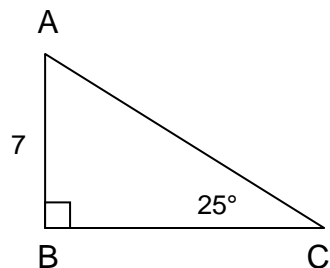
Hint: Always create equations which contain no more than one unknown (variable).

Solve each of the following triangles. Round answers to 2 decimal places.

1.

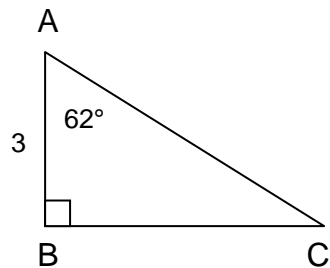


2.

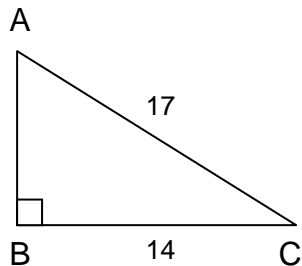


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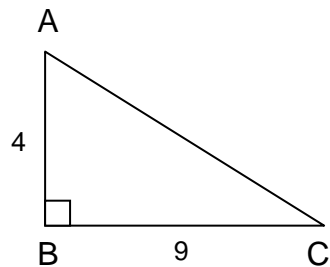
3.



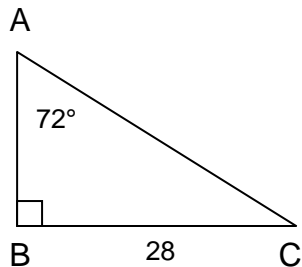
4.



5.



6.



Answers:

1. $a = 4.10$; $c = 2.87$; $\angle A = 55^\circ$

2. $a = 15.01$; $b = 16.56$; $\angle A = 65^\circ$

3. $a = 5.64$; $b = 6.39$; $\angle C = 28^\circ$

4. $c = 9.64$; $\angle A = 55.44^\circ$; $\angle C = 34.56^\circ$

5. $b = 9.85$; $\angle A = 66.04^\circ$; $\angle C = 23.96^\circ$

6. $b = 29.44$; $c = 9.10$; $\angle C = 18^\circ$