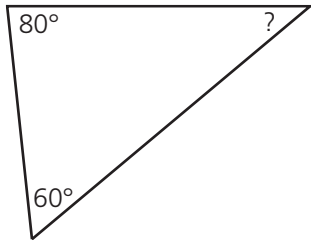


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The measures of the angles in a triangle always add up to 180° . If you know the measures of two of the angles, use the formula $x + y + z = 180$ to find the measure of the third angle.



What is the missing angle measure?

Substitute $x = 60$ and $y = 80$ into the formula $x + y + z = 180$, and solve for z :

$$60 + 80 + z = 180$$

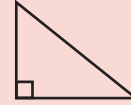
$$140 + z = 180$$

$$z = 40$$

The missing angle measure is 40° .

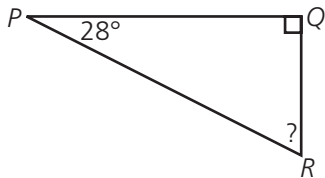
A **right angle** measures 90° .

It is shown in a triangle by a square corner.



Read each problem. Circle the letter of the best answer.

1 What is the measure of $\angle R$ in this triangle?



- A 62°
- B 72°
- C 118°
- D 152°

The small square mark shows that $\angle Q$ is a right angle, so its measure is 90° . Substitute $x = 28$ and $y = 90$ into the formula $x + y + z = 180$, and solve for z : $28 + 90 + z = 180 \rightarrow 118 + z = 180 \rightarrow z = 62$. The correct answer is A.

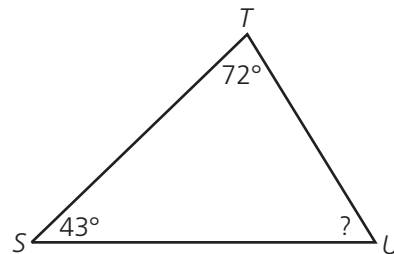
2 A triangle has two angles that measure 65° . What is the measure of the third angle?

- A 40°
- B 50°
- C 55°
- D 65°

3 Which could be the measures of the three angles of a triangle?

- A $30^\circ, 30^\circ, 60^\circ$
- B $30^\circ, 60^\circ, 60^\circ$
- C $30^\circ, 60^\circ, 90^\circ$
- D $30^\circ, 90^\circ, 90^\circ$

4 What is the measure of $\angle U$ in this triangle?

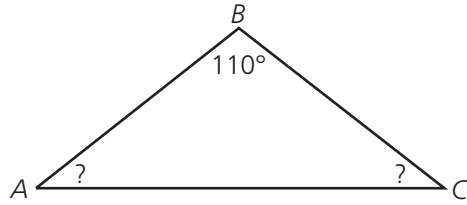


- A 29°
- B 61°
- C 65°
- D 85°

Read each problem. Write your answers.

- 5 In the triangle at the right, $\angle A$ and $\angle C$ have equal measures.

A What is the measure of $\angle A$?

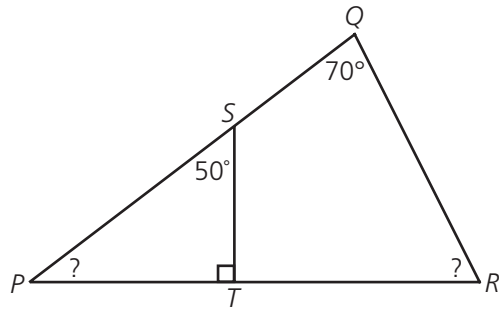


Answer: _____

B Explain how you found your answer.

- 6 In the diagram at the right, $\angle PST$ measures 50° , $\angle Q$ measures 70° , and $\angle PTS$ is a right angle.

A What is the measure of $\angle P$?



Answer: _____

B What is the measure of $\angle R$?

Answer: _____

C Explain how you found your answers.
