

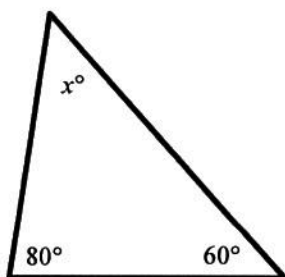
Fill in the blanks.

1. A triangle has a total of 180 degrees.
2. The acute angles in a right triangle have a total of 90 degrees.
3. Congruent figures have all corresponding sides and all corresponding angles congruent.
4. If two angles of one triangle are congruent to two angles of another triangle, then the third angles are congruent.
5. Scalene triangles have no sides congruent.
6. Equilateral triangles have all sides congruent.

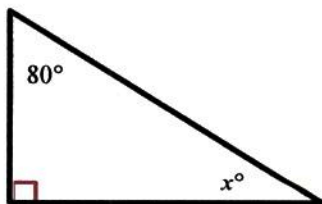
Match each diagram to the appropriate equation.

A. $80^\circ = x$	B. $80^\circ + 60^\circ = x$	C. $60^\circ = x$
D. $80^\circ + 60^\circ + x = 180^\circ$	E. $80^\circ + x = 90^\circ$	

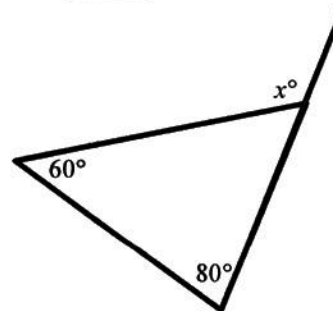
1. D



2. E

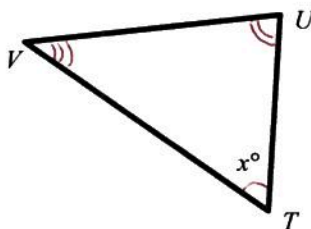
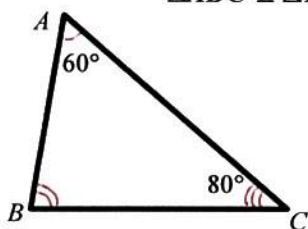


3. B



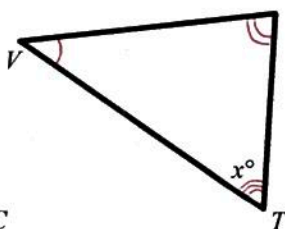
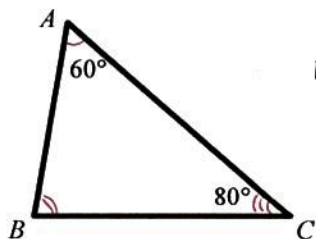
4. C

$\triangle ABC \cong \triangle TUV$



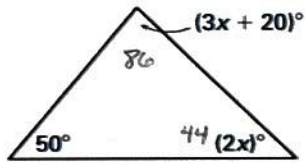
5. A

$\triangle ABC \cong \triangle VUT$



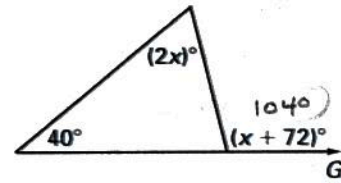
1. Find x then classify the triangle by its angles.

Acute



$$\begin{aligned} 3x + 20 + 2x + 50 &= 180 \\ 5x + 70 &= 180 \\ 5x &= 110 \\ x &= 22 \end{aligned}$$

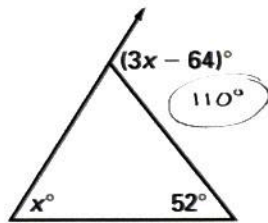
2. Find the measure of the exterior angle.



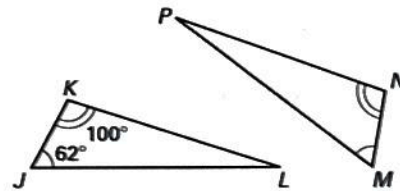
$$\begin{aligned} 40 + 2x &= x + 72 \\ x &= 32 \end{aligned}$$

3. Find the measure of the exterior angle.

$$\begin{aligned} 3x - 64 &= x + 52 \\ 2x &= 116 \\ x &= 58 \end{aligned}$$



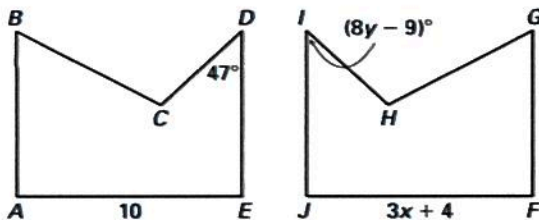
4. Find the measure of $\angle P$.



$$180 - 100 - 62 = 18^\circ$$

5. Find the value of x and y .

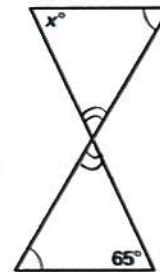
$$ABCDE \cong FGHIJ$$



$$\begin{aligned} 3x + 4 &= 10 \\ 3x &= 6 \\ x &= 2 \end{aligned}$$

$$\begin{aligned} 8y - 9 &= 47 \\ 8y &= 56 \\ y &= 7 \end{aligned}$$

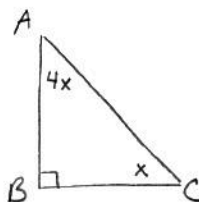
6. Find the value of x



$$x = 65$$

7. **Finding Angles** Find the measure of each angle in a right triangle, where the measure of acute angle A is four times the measure of acute angle C .

Diagram:



Equation:

$$\begin{aligned} 4x + x &= 90 \\ 5x &= 90 \\ x &= 18 \end{aligned}$$

$$m\angle A = 72^\circ$$

$$m\angle B = 90^\circ$$

$$m\angle C = 18^\circ$$