

## CHAPTER-7 | Triangles

QUIZ  
PART-10

1. In a right-angled triangle ABC, if  $\angle A = 90^\circ$  and  $AB = AC$ , what is  $\angle B$ ?

- A.  $30^\circ$   
B.  $45^\circ$   
C.  $60^\circ$   
D.  $90^\circ$  (B)

**Explanation:** Since  $\angle A = 90^\circ$  and  $AB = AC$ ,  $\triangle ABC$  is an isosceles right-angled triangle. Therefore,  $\angle B = \angle C = 45^\circ$ .

2. In  $\triangle ABC$ , if  $\angle A = 90^\circ$  and  $AB = AC$ , what is the measure of  $\angle C$ ?

- A.  $30^\circ$   
B.  $45^\circ$   
C.  $60^\circ$   
D.  $90^\circ$  (B)

**Explanation:** Since  $\triangle ABC$  is an isosceles right-angled triangle,  $\angle C = 45^\circ$ , because the sum of the angles in a triangle is  $180^\circ$ , and  $\angle B = \angle C$ .

3. In an equilateral triangle, what is the measure of each angle?

- A.  $45^\circ$   
B.  $60^\circ$   
C.  $90^\circ$   
D.  $120^\circ$  (B)

**Explanation:** In an equilateral triangle, all three angles are equal, and since the sum of angles in a triangle is  $180^\circ$ , each angle measures  $60^\circ$ .

4. In an equilateral triangle, if one angle measures  $60^\circ$ , what can be concluded about the other two angles?

- A. They are also  $60^\circ$   
B. One angle is  $90^\circ$   
C. One angle is greater than  $60^\circ$   
D. One angle is  $45^\circ$  (A)

**Explanation:** In an equilateral triangle, all three angles are equal, so the other two angles must also be  $60^\circ$ .

5. In  $\triangle ABC$ , if  $AB = AC$  and  $\angle A = 90^\circ$ , what is true about  $\triangle ABC$ ?

- A.  $\triangle ABC$  is a right-angled isosceles triangle  
B.  $\triangle ABC$  is an equilateral triangle  
C.  $\triangle ABC$  is an acute-angled triangle  
D.  $\triangle ABC$  is a scalene triangle (A)

**Explanation:** Since  $AB = AC$  and  $\angle A = 90^\circ$ ,  $\triangle ABC$  is a right-angled isosceles triangle.

6. In  $\triangle ABC$ , if  $\angle A = 90^\circ$  and  $AB = AC$ , what is the relationship between  $\angle B$  and  $\angle C$ ?

- A.  $\angle B = \angle C$   
B.  $B > C$   
C.  $B < C$   
D.  $\angle B = \angle C$  (A)

**Explanation:** In a right-angled isosceles triangle, the two angles B and C are equal, each measuring  $45^\circ$ .

7. If the angles of a triangle are  $60^\circ$  each, what type of triangle is it?

- A. Scalene triangle  
B. Right-angled triangle  
C. Isosceles triangle  
D. Equilateral triangle (D)

**Explanation:** If all three angles of a triangle are  $60^\circ$ , the triangle is equilateral, as all sides and angles are equal.

8. In  $\triangle ABC$ , if  $AB = AC$  and  $\angle A = 90^\circ$ , what is the type of triangle?

- A. Scalene triangle  
B. Isosceles right triangle  
C. Equilateral triangle  
D. Right-angled triangle (B)

**Explanation:** Since  $AB = AC$  and  $\angle A = 90^\circ$ ,  $\triangle ABC$  is an isosceles right triangle.

9. In an equilateral triangle, what is the sum of the angles?

- A.  $90^\circ$   
B.  $120^\circ$   
C.  $180^\circ$   
D.  $360^\circ$  (C)

**Explanation:** The sum of the angles in any triangle is  $180^\circ$ . In an equilateral triangle, each angle is  $60^\circ$ , so their sum is  $180^\circ$ .

10. If  $\triangle ABC$  is a right-angled triangle with  $AB = AC$ , what is the relationship between AB and AC?

- A.  $AB = AC$   
B.  $AB < AC$   
C.  $AB > AC$   
D.  $AB < AC$  (B)

**Explanation:** Since  $\triangle ABC$  is a right-angled isosceles triangle with  $AB = AC$ , the two sides are equal by the property of isosceles triangles.