

CHAPTER-6 | Triangles

QUIZ PART-06

1. If $\angle A = \angle P$, $\angle B = \angle Q$, and $\angle C = \angle R$, then triangles $\triangle ABC$ and $\triangle PQR$ are similar by:

- A. AA test
- B. SAS test
- C. SSS test
- D. None (A)

Explanation: AA similarity criterion – equal corresponding angles.

2. If $AB = XY$, $BC = YZ$, and $AC = XZ$, then triangles are similar by:

- A. AA test
- B. SAS test
- C. SSS test
- D. None (C)

Explanation: SSS similarity criterion – sides in the same ratio.

3. Which is not a similarity criterion for triangles?

- A. AA
- B. SAS
- C. SSS
- D. ASA (D)

Explanation: ASA is for congruence, not similarity.

4. The side-angle-side (SAS) similarity criterion is used when:

- A. Sides are equal.
- B. Angles are equal.
- C. Sides are proportional and one angle is equal.
- D. All of the above (C)

Explanation: SAS similarity criterion – one angle equal, sides proportional.

5. If two triangles have corresponding angles equal, then the third angle is also equal. This is known as:

- A. AA criterion
- B. SAS criterion
- C. SSS criterion
- D. AAA criterion (A)

Explanation: AA criterion – if two angles are equal, the third will be equal.

6. The SAS similarity criterion states that:

- A. Corresponding angles are equal.
- B. Corresponding sides are proportional.
- C. One angle equal and corresponding sides proportional.
- D. Sides are equal. (C)

Explanation: SAS similarity – one angle equal, sides proportional.

7. The AA similarity criterion involves:

- A. Proportional sides and equal angles.
- B. Equal angles only.
- C. Equal sides and angles.
- D. Equal sides only. (B)

Explanation: AA similarity – equal corresponding angles.

8. If the corresponding sides of two triangles are in proportion and one angle is equal, the triangles are:

- A. Congruent
- B. Similar
- C. Equal
- D. None (B)

Explanation: SAS similarity – corresponding sides proportional, one angle equal.

9. The ratio of areas of two similar triangles is:

- A. Equal to the ratio of corresponding sides.
- B. The square of the ratio of corresponding sides.
- C. The cube of the ratio of corresponding sides.
- D. The same as the perimeter ratio. (B)

Explanation: Area ratio = square of side ratio in similar triangles.

10. If two triangles are similar, which of the following is true?

- A. The corresponding sides are equal.
- B. The corresponding angles are equal.
- C. The corresponding areas are equal.
- D. The corresponding perimeters are proportional. (B)

Explanation: Similar triangles have equal corresponding angles.