

CHAPTER-6 | Triangles

QUIZ PART-08

1. If $AB = XY$ and $AC = XZ$, then $\triangle ABC \sim \triangle XYZ$ by:
- AA criterion
 - SAS criterion
 - SSS criterion
 - None

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

2. Two polygons are similar if their corresponding sides are in the ratio 3:4. What is the ratio of their areas?
- 3:4
 - 4:3
 - 9:16
 - 12:16

Explanation: The ratio of areas is the square of the ratio of corresponding sides, $(3/4)^2 = 9/16$.

3. If two triangles are similar, their corresponding heights are:
- Equal
 - Proportional
 - Same
 - None

Explanation: In similar triangles, the corresponding heights are proportional to the corresponding sides.

4. The ratio of the perimeters of two similar triangles is:
- The same as the ratio of corresponding sides
 - The same as the ratio of corresponding areas
 - The same as the ratio of corresponding angles
 - The square of the ratio of corresponding sides

Explanation: The ratio of perimeters is equal to the ratio of corresponding sides.

5. The ratio of the areas of two similar triangles is 25:36. The ratio of their corresponding sides is:
- 5:6
 - 6:5
 - 25:36
 - 3:4

Explanation: The ratio of areas is the square of the ratio of sides, so the side ratio is $\sqrt{(25/36)} = 5/6$.

6. The sum of the corresponding angles of two similar triangles is always:
- 180°
 - 360°
 - 90°
 - Equal

Explanation: The sum of corresponding angles in similar triangles is 180° , as they have equal corresponding angles.

7. Two figures are said to be similar if:
- They have the same shape and size
 - Their corresponding angles are equal and corresponding sides are proportional
 - Their corresponding sides are equal
 - None of these

Explanation: Similar figures have the same shape, with corresponding angles equal and corresponding sides in proportion.

8. If the corresponding sides of two triangles are in the ratio 5:7, the ratio of their areas will be:
- 5:7
 - 5:7 squared
 - 25:49
 - 49:25

Explanation: The ratio of areas is the square of the side ratio, $(5/7)^2 = 25/49$.

9. Two triangles are similar. If one side of the first triangle is 6 cm and the corresponding side of the second triangle is 9 cm, what is the ratio of the areas of the triangles?
- 2:3
 - 4:9
 - 6:9
 - 9:16

Explanation: The ratio of areas is the square of the ratio of corresponding sides, $(6/9)^2 = 4/9$.

10. If two triangles are similar and their corresponding sides are in the ratio 3:5, then the ratio of their corresponding altitudes is:
- 5:3
 - 3:5
 - 9:25
 - 25:9

Explanation: The ratio of corresponding altitudes is the same as the ratio of corresponding sides in similar triangles.