1. If $DE \parallel BC$ and AD=3 cm, BD=4 cm, BC=14 cm, then DE is:
   A. 7 cm B. 6 cm
   C. 8 cm D. 5 cm (B)

Explanation : By the Basic Proportionality Theorem, $\frac{AD}{BD} = \frac{DE}{BC}$, so DE= 6cm.

2. Perimeter ratio of similar triangles is 64 : 24. If PQ=12 cm, AB is:
   A. 30 cm B. 32 cm
   C. 35 cm D. 28 cm (A)

Explanation: The ratio of perimeters is equal to the ratio of corresponding sides. AB = $\frac{64}{24} * 12 = 30cm$.

3. In two equiangular triangles, corresponding sides are always:
   A. Proportional B. Equal
   C. Similar D. Congruent (A)

Explanation: In equiangular triangles, the corresponding sides are always proportional.

4. Ratio of corresponding sides 3 : 4, ratio of areas is:
   A. 3:4 B. 9:16
   C. 16:9 D. 4:9 (B)

Explanation: The ratio of areas is the square of the ratio of corresponding sides, so $(\frac{3}{4})^2 = \frac{9}{16}$.

5. Similar triangles have:
   A. Equal angles, proportional sides
   B. Equal sides, proportional angles
   C. Equal areas
   D. Same perimeter (A)

Explanation : For two triangles to be similar, their corresponding angles must be equal, and their corresponding sides must be proportional.

6. The line divides sides in the same ratio. This is:
   A. Thales Theorem
   B. Pythagoras Theorem
   C. Converse of B.P.T.
   D. None (C)

Explanation : This is the converse of the Basic Proportionality Theorem (B.P.T.), stating that if a line divides two sides of a triangle proportionally, it is parallel to the third side.

7. Perimeter ratio 3:4, area ratio is:
   A. 3:4 B. 9:16
   C. 4:3 D. 16:9 (B)

Explanation : The ratio of areas is the square of the ratio of the perimeters, so $(\frac{3}{4})^2 = \frac{9}{16}$

8. Ratio of corresponding sides 7:5, area ratio is:
   A. 49:25 B. 7:5
   C. 12:16 D. 5:7 (A)

Explanation : The ratio of the areas is the square of the ratio of corresponding sides, $(\frac{7}{5})^2 = \frac{49}{25}$

9. In similar triangles, ratio of heights is:
   A. Same as sides B. Different
   C. Equal to angles D. None (A)

Explanation : The ratio of the heights of similar triangles is the same as the ratio of their corresponding sides.

10. Ratio of corresponding sides 2:3, height ratio is:
    A. 2:3 B. 3:2
    C. 4:9 D. 9:4 (A)

Explanation : The ratio of the heights of similar triangles is the same as the ratio of their corresponding sides, i.e., 2:3.

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