NCERT Mathematics Class 10 Exemplar Ch 6 Triangles Part 1

EXERCISE 6.1

1. In Fig. 6.2, $\angle BAC = 90°$ and $AD \perp BC$. Then,

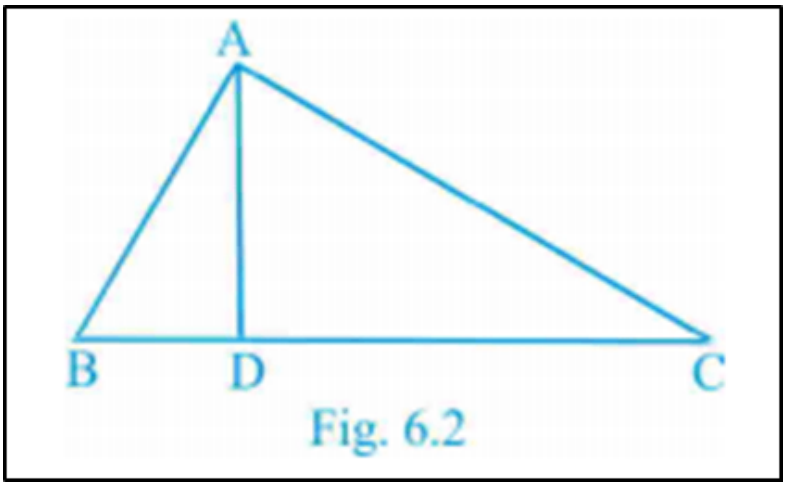

Fig. 6.2

(A) $BD \cdot CD = BC^2$ (B) $AB \cdot AC = BC^2$

(C) $BD \cdot CD = AD^2$ (D) $AB \cdot AC = AD^2$

Answer: C

2. The lengths of the diagonals of a rhombus are $16\,cm$ and $12\,cm$. Then, the length of the side of the rhombus is

(A) $9\,cm$ (B) $10\,cm$

(C) $8\,cm$ (D) $20\,cm$

Answer: B

3. If $\Delta ABC \sim EDF$ and ΔABC is not similar to ΔDEF, then which of the following is not true?

(A) $BC \cdot EF = AC \cdot FD$ (B) $AB \cdot EF = AC \cdot DE$

(C) $BC \cdot DE = AB \cdot EF$ (D) $BC \cdot DE = AB \cdot FD$

Answer: C

4. If in two triangles ABC and PQR, $\frac{AB}{QR} = \frac{BC}{PR} = \frac{CA}{PQ}$, then

(A) $\Delta PQR \sim CAB$ (B) $\Delta PQR \sim ABC$

(C) $\Delta CBA \sim PQR$ (D) $\Delta BCA \sim PQR$

Answer: A

5. In Fig. 6.3, two line segments AC and BD intersect each other at the point P such that $PA = 6\,cm$, $PB = 3\,cm$, $PC = 2.5\,cm$, $PD = 5\,cm$, $\angle APB = 50°$ and $\angle CDP = 30°$. Then, &#x ∠ ; PBA is equal to

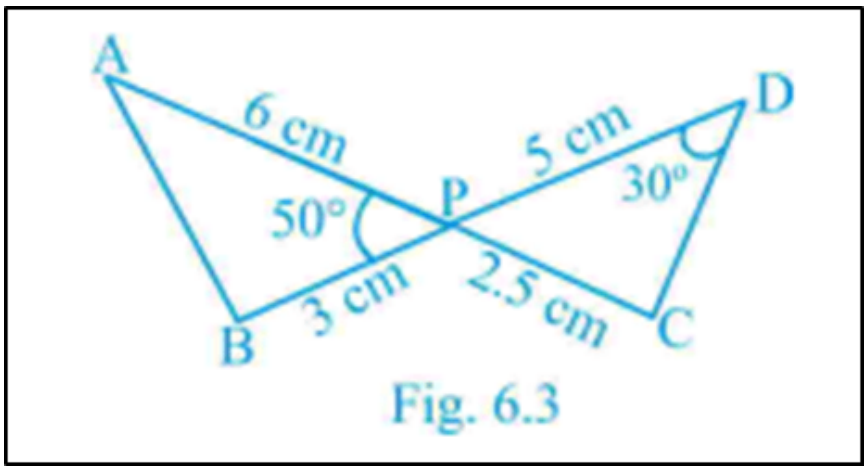

Fig. 6.3

(A) 50° (B) 30°

(C) 60° (D) 100°

Answer: D

6. If in two triangles DEF and PQR, $\angle D = Q$ and $\angle R = E$, then which of the following is not true?

(A) $\frac{EF}{PR} = \frac{DF}{PQ}$ (B) $\frac{DE}{PQ} = \frac{EF}{RP}$

(C) $\frac{DE}{QR} = \frac{DF}{PQ}$ (D) $\frac{EF}{RP} = \frac{DE}{QR}$

Answer: B

7. In triangles ABC and DEF, $\angle B = E$, $\angle F = C$ and $AB = 3DE$. Then, the two triangles are

(A) congruent but not similar (B) similar but not congruent

(C) neither congruent nor similar (D) congruent as well as similar

Answer: B

8. It is given that $\Delta ABC \sim PQR$, with $\frac{BC}{QR} = \frac{1}{3}$, Then, $\frac{ar(PRQ)}{ar(BCA)}$ is equal to

(A) 9 (B) 3 (C) $\frac{1}{3}$ (D) $\frac{\frac{1}{9}}{9}$

Answer: A