INDIAN SCHOOL AL WADI AL KABIR

Department: Mathematics

Class X **Worksheet – Triangles**

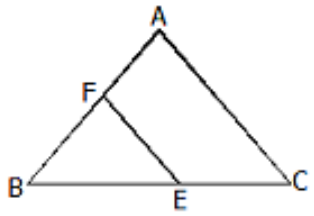
(MCQ & Assertion Reasoning) **06 – 08 -2023**

Questions of 1 mark each

Q.1. ΔABC and ΔPQR are similar triangles such that ∠A = 32° and ∠R = 65°, then ∠B is

A	83°	B	32°	C	65°	D	97°

Q.2. In the fig, EF ‖ AC, BC = 10cm, AB = 13cm and EC = 2cm, then AF is



A	2.6 cm	B	26 cm	C	10 cm	D	260 cm

Q.3. In ΔABC, D and E are points on side AB and AC respectively such that DE ‖ BC. If AE = 2cm, AD = 3 cm and BD = 4.5 cm, then CE is

A	4 cm	B	3 cm	C	30 cm	D	6 cm

Q.4. In two triangles ABC and PQR, if $\frac{AB}{QR} = \frac{BC}{RP} = \frac{CA}{PQ}$, then

A	ΔPQR ~ ΔCAB	B	ΔPQR ~ ΔABC	C	ΔPQR ~ ΔCBA	D	ΔPQR ~ ΔBCA

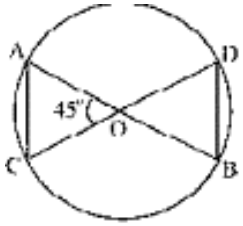
Q.5. In triangles PQR and MST, ∠P = 55°, ∠Q = 25°, ∠M = 100° and ∠S = 25°, then

A	ΔQPR ~ ΔSTM	B	ΔPQR ~ ΔSTM	C	ΔQPR ~ ΔMST	D	ΔPQR ~ ΔMTS

Q.6. If $\frac{AB}{ED} = \frac{BC}{DF}$, then triangles ABC and DEF are similar if

A	∠B = ∠E	B	∠A = ∠D	C	∠B = ∠D	D	∠A = ∠F

Q.7. In fig, O is the point of intersection of two chords AB and CD such that OB = OD, then triangles OAC and ODB are



A	equilateral but not similar	B	isosceles but not similar	C	equilateral and similar	D	isosceles and similar

Q.8. In ΔABC, D and E are points on AC and BC respectively such that DE || AB. If AD = 2x, BE = 2x – 1, CD = x + 1 and CE = x – 1, then the value of x is

A	1	B	$\frac{1}{3}$	C	3	D	$-\frac{1}{3}$

Q.9. If ΔABC ~ ΔEDF, then which one of the following is not true?

A	BC . EF = AC . DF	B	AB . EF = AC . ED	C	BC . ED = AB . DF	D	BC . ED = AB . DF

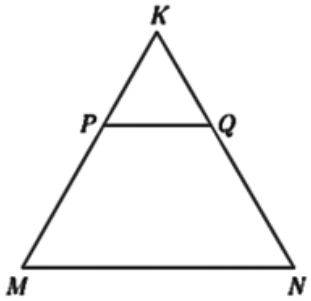
Q.10. In ΔABC, D and E are points on AB and AC respectively and DE ‖ BC. If AB = 7.6 cm, AD = 1.9 cm, then AE: EC is:

A	1 : 4	B	4 : 1	C	1 : 3	D	3 : 1

Q.11. If Δ ABC ~ Δ DEF *is* such that 2AB = DE and BC = 8 cm, then EF is:

A	4 cm	B	16 cm	C	8 cm	D	112 cm

Q.12. In the figure, *PQ* is parallel to *MN*. If $\frac{KP}{PM} = \frac{4}{13}$ and KN = 34 cm, then find KQ.



A	2 cm	B	17 cm	C	4 cm	D	8 cm

Q.13.	The perimeters of two similar triangles ABC and LMN are 60 cm and 48 cm respectively. If LM = 8 cm, then the length of AB is							
	A	10 cm	B	12 cm	C	8 cm	D	6 cm

ASSERTION AND REASONING

DIRECTION: In questions, a statement of **Assertion (A)** is followed by a statement of **Reason (R).** Choose the correct option

(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A)

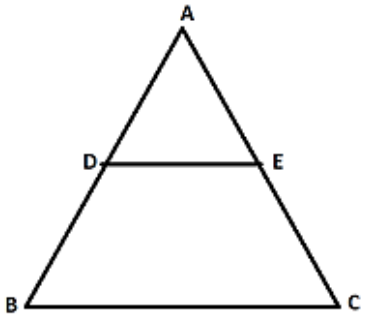
(b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A)

(c) Assertion (A) is true but reason (R) is false.

(d) Assertion (A) is false but reason (R) is true.

Q.14. **Assertion:** If D is a point on side QR of ΔPQR such that PD ⊥ QR, then ΔPQD ~ ΔRPD.

Reason: In the figure given below, if ∠D = ∠C then ΔADE ~ ΔACB.



Q.15. **Assertion:** If ΔABC and ΔPQR are congruent triangles, then they are also similar triangles.

Reason: All congruent triangles are similar but similar triangles need not be congruent.

ANSWERS

Q.1	A	**Q.2**	A	**Q.3**	B	**Q.4**	A	**Q.5**	A
Q.6	C	**Q.7**	D	**Q.8**	B	**Q.9**	C	**Q.10**	C
Q.11	B	**Q.12**	D	**Q.13**	A	**Q.14**	d	**Q.15**	a