INDIAN SCHOOL AL WADI AL KABIR
Class X, Mathematics
TRIANGLES WORKSHEET

OBJECTIVE TYPE (1 Mark)

Q.1. In ΔABC, D and E are points on sides AB and AC respectively, such that DE ∥ BC. If AD = 3 cm, DB = 9 cm, and AE = 4 cm, find the length of EC.

	A	24cm	**B**	12cm	**C**	6cm	**D**	10cm

Q.2. In ΔABC, D and E are points on AB and AC respectively, such that DE ∥ BC. If AD = x, BD = x + 2, AE = x + 4, and CE = x + 8, find the value of x.

	A	2	**B**	6	**C**	4	**D**	**8**

Q.3. The perimeters of two similar triangles ABC and DEF are 96 cm and 64 cm respectively. If AB = 18 cm, find the length of DE.

	A	12cm	**B**	6cm	**C**	3cm	**D**	16cm

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

	A	ΔPQR ~ ΔABC	**B**	ΔPQR ~ ΔBAC	**C**	ΔPQR ~ ΔCBA	**D**	ΔPQR ~ ΔCAB

Q.5. If in two triangles DEF and PQR, <D = <Q and <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**	$\frac{EF}{RP}=\frac{DE}{QR}$

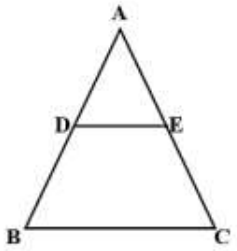
Q.6. EFGH is a trapezium in which EF ∥ HG, and X, Y are points on EH and FG respectively such that XY ∥ HG. If XH = 12 cm, FY = 28 cm, and YG = 20 cm, find EH.

	A	14.4cm	**B**	28.8 cm	**C**	12.2cm	**D**	28cm

Q.7. In triangles ABC and XYZ, ∠A = 40°, ∠B = 65°, ∠X = 75°, and ∠Y = 65°. Then what is the relation between the two triangles?

	A	Equal	**B**	Congruent	**C**	Similar	**D**	No relation

Q.8. If in ΔABC, DE ∥ BC, ∠AED = 60° and ∠ABC = 70°, then ∠BAC =?



	A	150^O	**B**	50^0	**C**	60^0	**D**	70^0

Q.9.	In ΔABC, D and E are points on AB and AC respectively such that DE ∥ BC. If AD = 2.4 cm, DB = 3.6 cm, and AE = 3.2 cm, then AC =?							
	A	8 cm	**B**	4.8cm	**C**	3.2cm	**D**	48cm
Q.10.	Two triangles are similar if their corresponding angles are:							
	A	Equal	**B**	Proportional	**C**	Supplementary	**D**	Complementary
Q.11.	If in two triangles ABC and DEF, ∠A =∠E and ∠F =∠B, then which of the following is not true?							
	A	$\frac{BC}{DF}=\frac{AC}{DE}$	**B**	$\frac{BC}{DF}=\frac{BA}{EF}$	**C**	$\frac{AB}{FE}=\frac{AC}{ED}$	**D**	$\frac{AB}{DE}=\frac{BC}{DF}$
Q.12.	In a triangle ABC, PQ ∥ BC, where P,Q are points on AB and AC respectively and $\frac{AP}{PB}=\frac{AQ}{QC}=\frac{1}{2}$, then:							
	A	PQ=BC	**B**	PQ=$\frac{1}{3}$ BC	**C**	PQ=$\frac{1}{2}$ BC	**D**	PQ=$\frac{1}{4}$ BC
	ASSERTION AND REASONING							
	DIRECTION: 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.13.	Assertion(A): If ΔABC ~ ΔPQR, AB = 4 cm, PQ = 6 cm, and the area of ΔABC is 16 cm², then the area of ΔPQR is 36 cm². Reason(R): The ratio of the areas of two similar triangles is equal to the ratio of the squares of their corresponding sides.							
Q.14.	Assertion(A): In ΔABC, D and E are points on sides AB and AC respectively such that DE ∥ BC. If AD = 2 cm, DB = 3 cm, and AE = 3 cm, then EC = 4.5 cm. Reason (R): If a line is drawn parallel to one side of a triangle to intersect the other two sides in distinct points, then it divides the other two sides in the same ratio (Basic Proportionality Theorem)							
	ANSWERS							
	Q.1.	B	**Q.2.**	C	**Q.3.**	A	**Q.4.**	D

	Q.5.	A	**Q.6.**	B	**Q.7.**	C	**Q.8.**	B
	Q.9.	A	**Q.10.**	A	**Q.11.**	D	**Q.12**	B
	Q.13	A	**Q.14**	A				

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