

INTERNATIONAL INDIAN SCHOOL BURAIDAH

Worksheet 2026-27

CLASS: X

SUBJECT: MATHEMATICS

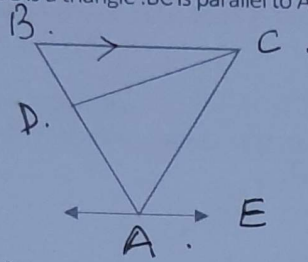
Chapter No:6 – Triangles

MCQ:

1-In $\triangle PQR$, if PS is the internal bisector of $\angle P$ meeting QR at S and $PQ=15$ cm, $QS=(3+x)$ cm, $SR=(x-3)$ cm and $PR=7$ cm then find the value of x .

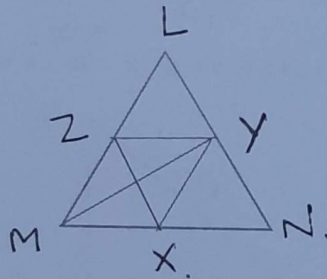
- (a) 2.85 cm (b) 8.25 cm (c) 5.28 cm (d) 8.52 cm

2-In the figure given below, ABC is a triangle. BC is parallel to AE . If $BC=AC$, then what is the value of $\angle CAE$



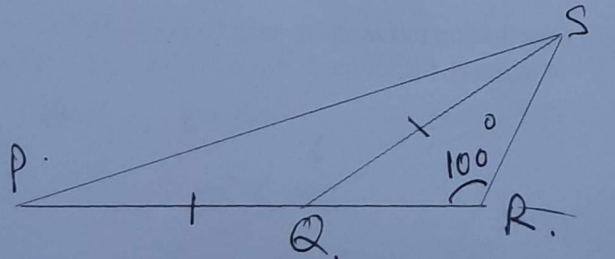
- (a) 20° (b) 40° (c) 30° (d) 50°

3-In the figure given below, YZ is parallel to MN , XY is parallel to LM and XZ is parallel to LN . Then MY is:



- (a) The median of $\triangle LMN$ (b) The angular bisector of $\angle LMN$
(c) perpendicular to LN (d) perpendicular bisector of LN

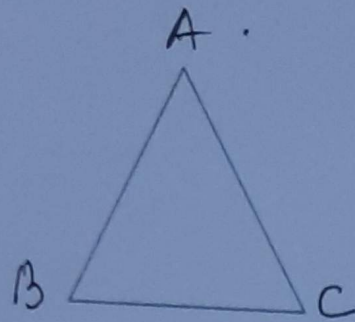
4-In the given below figure, $PQ=QS$ and $QR=RS$. If $\angle SRQ = 100^\circ$ then find the angle of $\angle QPS$



- (a) 40° (b) 20° (c) 30° (d) 15°

5-The vertical angle of an isosceles triangle is 15° more than each of its base angles. What is the

vertical angle ?



(a) 35°

(b) 65°

(c) 55°

(d) 70°

6- In $\triangle ABC$, D and E are points on sides AB and AC, such that $DE \parallel BC$. If $AD = x$, $DB = x-2$, $AE = x+2$ and $EC = x-1$, then the value of x is :

(a) 4

(b) 1

(c) 2

(d) 8

7- In $\triangle ABC$, the angle bisector of $\angle A$ cuts BC at E. Find the length of AC, if the lengths of AB, BE and EC are 9 cm, 3.6 cm and 2.4 cm ?

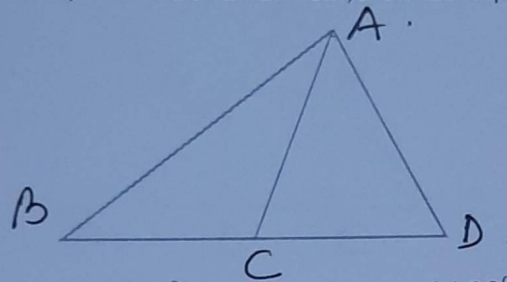
(a) 5.4 cm

(b) 4.8 cm

(c) 8 cm

(d) 6 cm

8- In the given figure, if $\angle B = 38^\circ$, $AC = BC$ and $AD = CD$, then $\angle D$ equals to:



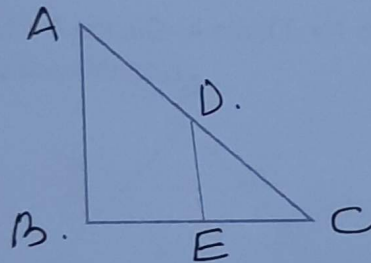
(a) 26°

(b) 38°

(c) 28°

(d) 52°

9- In $\triangle ABC$, $DE \parallel AB$. If $AB = a$, $DE = x$, $BE = b$ and $EC = c$. Express x in terms of a, b and c.



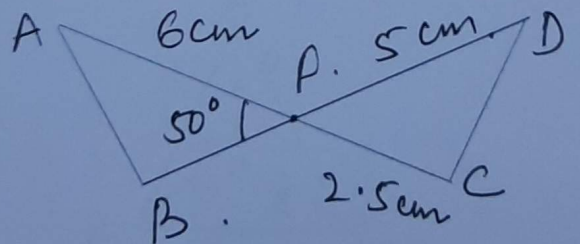
(a) $\frac{ac}{b}$

(b) $\frac{ab}{c}$

(c) $\frac{ac}{b+c}$

(d) $\frac{ab}{b+c}$

10- In fig, 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, $\angle APB = 50^\circ$, $\angle CDP = 30^\circ$. Then $\angle PBA$ is equal to



(a) 30°

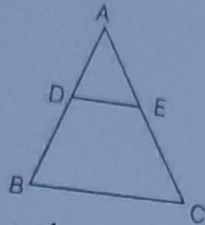
(b) 80°

(c) 60°

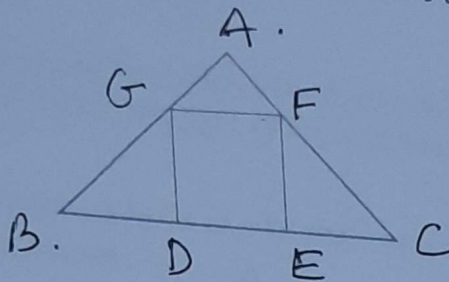
(d) 100°

Subjective :

1-In the given figure, $DE \parallel BC$. such that $AD = (4x-3)$ cm, $AE = (8x-7)$ cm, $BD = (3x-1)$ cm and $CE = (5x-3)$ cm find the value of x

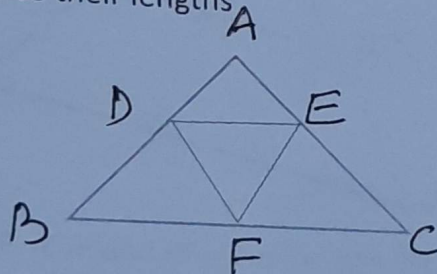


2-In the given figure, DEFG is a square and $\angle BAC = 90^\circ$, Prove that :

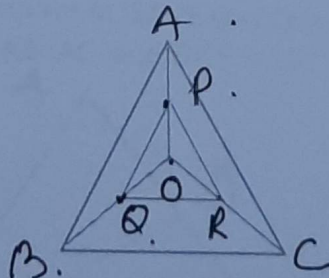


- (i) $\triangle AGF \sim \triangle DBG$
- (ii) $\triangle AGF \sim \triangle EFC$
- (iii) $DE^2 = BD \times EC$

3-In the given figure, $AD = 3$ cm, $AE = 5$ cm, $BD = 4$ cm, $CE = 4$ cm, $CF = 2$ cm, $BF = 2.5$ cm, then find the pair of parallel lines and hence their lengths



4-In the given figure $PQ \parallel AB$ and $PR \parallel AC$ Prove that $QR \parallel BC$



5-The diagonals of Quadrilateral ABCD intersect each other at the point O Such that

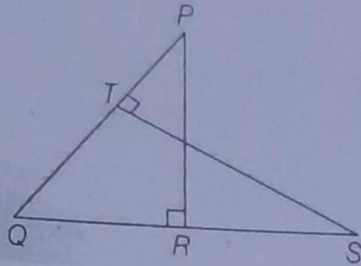
$\frac{AO}{OC} = \frac{BO}{OD}$. Show that ABCD is a Trapezium.

6-Through the midpoint M of the side CD of a Parallelogram ABCD, the line BM is drawn intersecting AC at L and AD produced at E and AD=DE. Prove that EL = 2BL.

7-D is the point on the side BC of a triangle ABC such that $\angle ADC = \angle BAC$ prove that $CA^2 = CB \cdot CD$

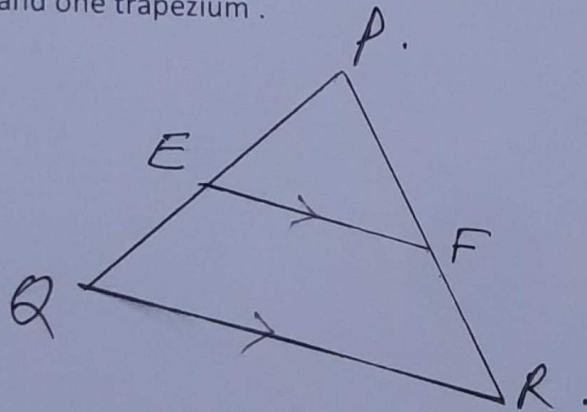
8-If AD and PM are medians of triangles $\triangle ABC$ and $\triangle PQR$ respectively where $\triangle ABC \sim \triangle PQR$ Prove that $\frac{AB}{PQ} = \frac{AD}{PM}$

9- In the given figure, PQR and QST are two right-angled triangles, right-angled at R and T respectively. Prove that $QR \times QS = QP \times QT$



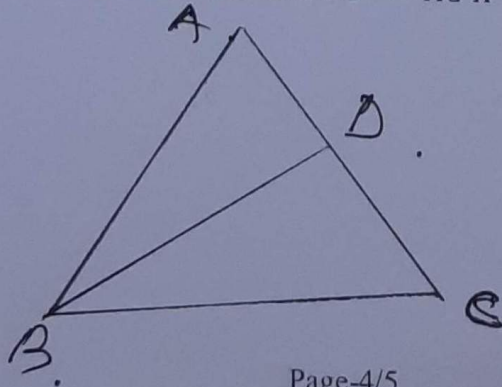
10-A Girl of height 90 cm is walking away from the base of lamp post at a speed of 1.2 m/s. If the lamp is 3.6 m above the ground, find the length of her shadow after 4 seconds.

11-Kitchen Garden of Ms. Sanjana is in the form of a Triangle as shown. She wants to divide it in two parts; one triangle and one trapezium.



She takes $PE=4m$, $QE=4.5m$, $PF=8m$ and $RF=9m$. Is $EF \parallel QR$? Justify your answer.

12-Students of school decided to participate in 'SAVE Girl Child' campaign. They decided to decorate a triangular path as shown. If $AB=AC$ and $BC^2 = AC \times CD$, then prove that $BD = BC$



13-In $\triangle ABC$, AD is the bisector of $\angle A$. If $AB = 5.6$ cm, $BD = 3.2$ cm and $BC = 6$ cm, find AC.

14-The Perimeters of two similar triangles are 25 cm and 15 cm respectively. If one side of the first triangle is 9 cm, find the corresponding side of the second triangle.

15- X and Y are points on the sides AB and AC respectively of a triangle ABC such that $\frac{AX}{AB} = \frac{1}{4}$, $AY = 2$ cm and $YC = 6$ cm. Find whether $XY \parallel BC$ or not