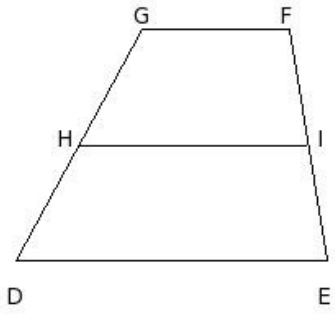
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Mid-Point and Intercept Theorems

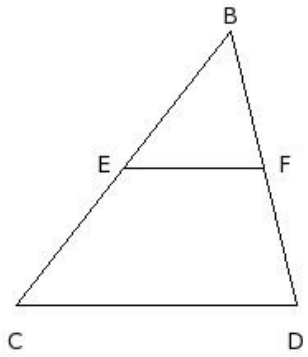
Grade : ICSE Grade IX

1. In the given figure, DEFG is a trapezium. H and I are mid-points of DG and EF.Given DE = 19 cm and FG = 9 cm, find HI



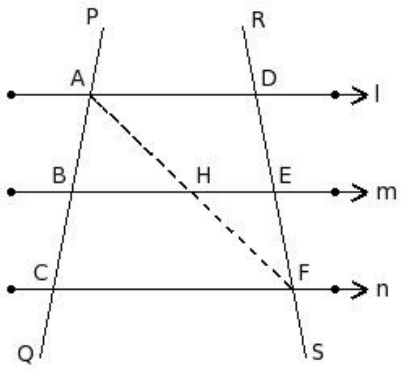
(i) 13.0 cm (ii) 14.0 cm (iii) 15.0 cm (iv) 16.0 cm (v) 12.0 cm

2. In the given figure $\triangle BCD$,
E is the mid-point of $\overline{BC}$ and $\overline{EF} \parallel \overline{CD}$, then EC =



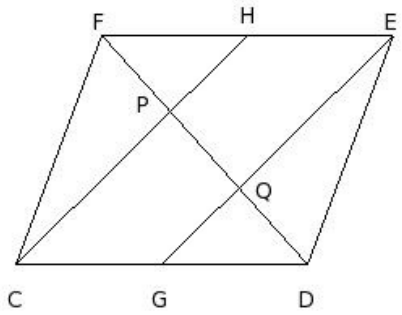
(i) FD (ii) BE (iii) DB (iv) BF (v) BC

3. In the given figure, three lines l , m and n are such that l ∥ m ∥ n.
Two transversals PQ and RS intersect them at the points A , B , C and D , E , F respectively.
$\triangle FDA \sim$



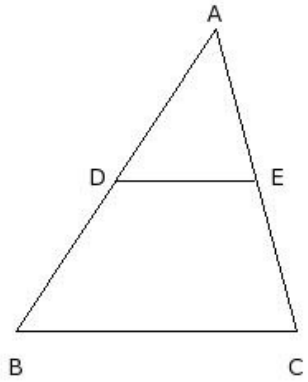
(i) $\triangle DAE$ (ii) $\triangle DCF$ (iii) $\triangle ABH$ (iv) $\triangle ACF$ (v) $\triangle FEH$

4. In the given figure, CDEF is a parallelogram such that G and H are mid-points of sides CD & EF. CH meets DF at P and EG meets DF at Q. Given DF = 19 cm, find PQ



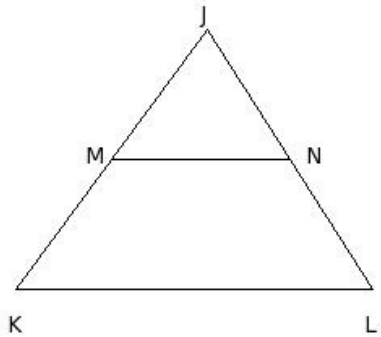
(i) 6.33 cm (ii) 4.33 cm (iii) 7.33 cm (iv) 8.33 cm (v) 5.33 cm

5. In the given figure $\triangle ABC$, D is the mid-point of $\overline{AB}$ and $\overline{DE} \parallel \overline{BC}$, then AD =



(i) BC (ii) AE (iii) $\frac{CA}{2}$ (iv) $\frac{AB}{2}$ (v) $\frac{BC}{2}$

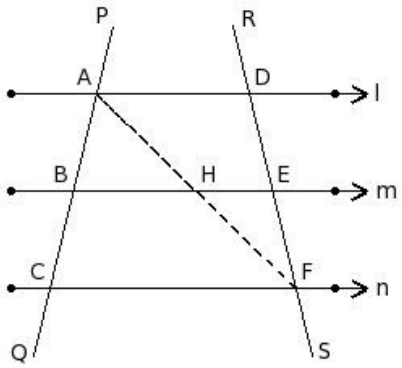
6. In the given figure $\triangle JKL$, M is the mid-point of $\overline{JK}$ and $\overline{MN} \parallel \overline{KL}$, then JM =



(i) NL (ii) JK (iii) MK (iv) JN (v) LJ

In the given figure, three lines l , m and n are such that l ∥ m ∥ n.

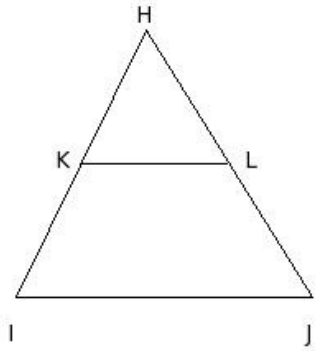
7. Two transversals PQ and RS intersect them at the points A , B , C and D , E , F respectively.
∠FEH =



(i) ∠EHF (ii) ∠ABH (iii) ∠DAF (iv) ∠FDA (v) ∠ACF

In the given figure△HIJ,

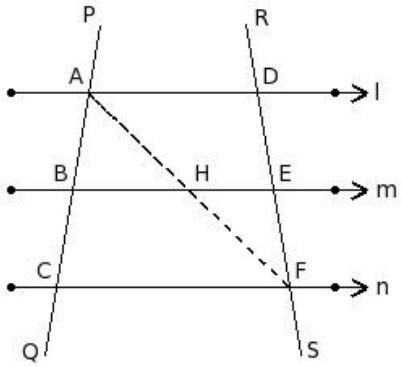
8. Kis the mid-point of $\overline{HI}$ and $\overline{KL} \parallel \overline{IJ}$,then HL=



(i) KI (ii) HK (iii) JH (iv) LJ (v) HI

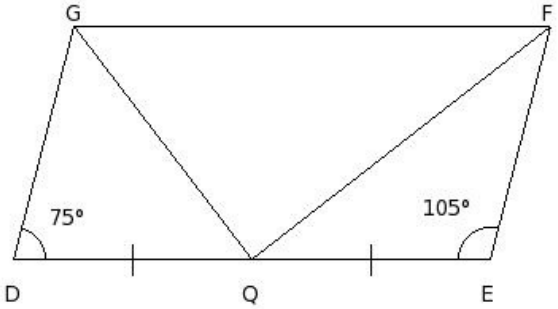
In the given figure, three lines l , m and n are such that l ∥ m ∥ n.

9. Two transversals PQ and RS intersect them at the points A , B , C and D , E , F respectively.
∠BHA =



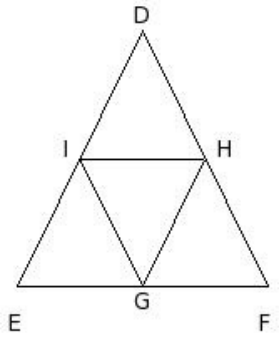
(i) ∠AFD (ii) ∠CFA (iii) ∠HFE (iv) ∠DAF (v) ∠EHF

10. In the given figure, DEFG is a parallelogram such that Q is the mid-point of DE and DE = 2GD. Find ∠GQF



(i) 92° (ii) 90° (iii) 89° (iv) 88° (v) 91°

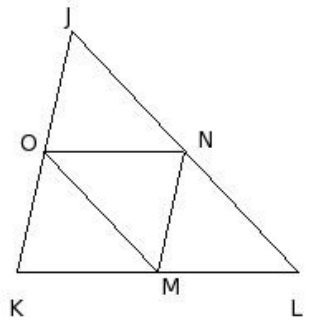
11. In the given figure, the area of the △DEF is x sq.cm. G,H,I are the mid-points of the sides EF , FD and DE respectively. The area of the △GHI is



(i) $\frac{2}{3}$ of area of △DEF (ii) $\frac{3}{4}$ of area of △DEF (iii) $\frac{1}{3}$ of area of △DEF (iv) $\frac{1}{4}$ of area of △DEF

(v) $\frac{1}{2}$ of area of △DEF

12. In the given figure, the area of the △JKL is x sq.cm. M,N,O are the mid-points of the sides KL , LJ and JK respectively. The area of the △MNO is

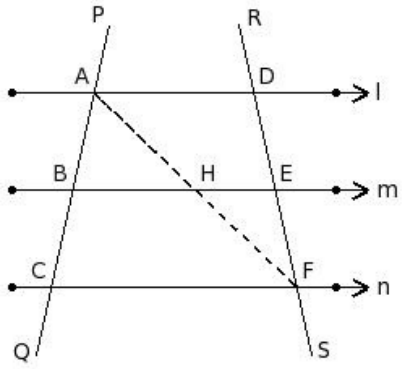


(i) $\frac{1}{4}$ of area of △JKL (ii) $\frac{3}{4}$ of area of △JKL (iii) $\frac{2}{3}$ of area of △JKL (iv) $\frac{1}{3}$ of area of △JKL (v) $\frac{1}{2}$ of area of △JKL

In the given figure, three lines l , m and n are such that l ∥ m ∥ n.

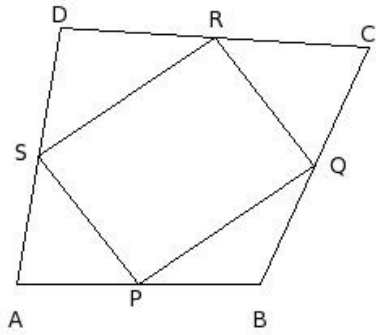
13. Two transversals PQ and RS intersect them at the points A , B , C and D , E , F respectively.

∠FAC =



(i) ∠HFE (ii) ∠FEH (iii) ∠HAB (iv) ∠FDA (v) ∠AFD

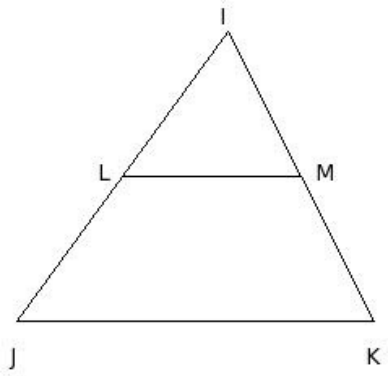
14. ABCD is a quadrilateral. P, Q, R and S are mid-points of AB, BC, CD and DA respectively.If AC = 26 cm and BD = 20 cm, find the measure of the sides of PQRS.



(i) 14 cm, 10 cm, 14 cm, 10 cm (ii) 13 cm, 10 cm, 13 cm, 10 cm (iii) 15 cm, 10 cm, 15 cm, 10 cm

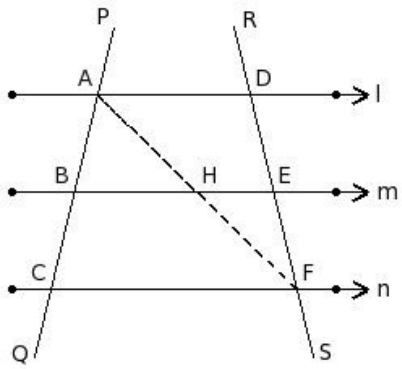
(iv) 13 cm, 7 cm, 13 cm, 7 cm (v) 13 cm, 9 cm, 13 cm, 9 cm

15. In the given figure $\triangle IJK$,
L is the mid-point of $\overline{IJ}$ and $\overline{LM} \parallel \overline{JK}$, then IM =



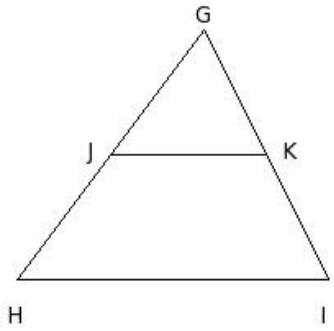
(i) $\frac{IJ}{2}$ (ii) $\frac{KI}{2}$ (iii) JK (iv) $\frac{JK}{2}$ (v) IL

16. In the given figure, three lines l , m and n are such that l ∥ m ∥ n.
Two transversals PQ and RS intersect them at the points A , B , C and D , E , F respectively.
$\triangle FDA \sim$



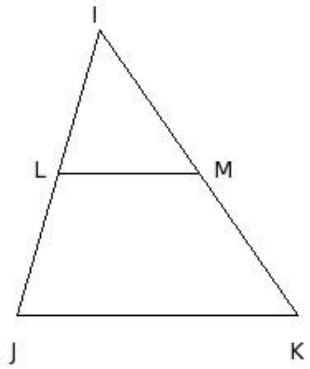
(i) $\triangle ABH$ (ii) $\triangle FEH$ (iii) $\triangle ACF$ (iv) $\triangle DAE$ (v) $\triangle DCF$

17. In the given figure $\triangle GHI$,
J is the mid-point of $\overline{GH}$ and $\overline{JK} \parallel \overline{HI}$, then GK =



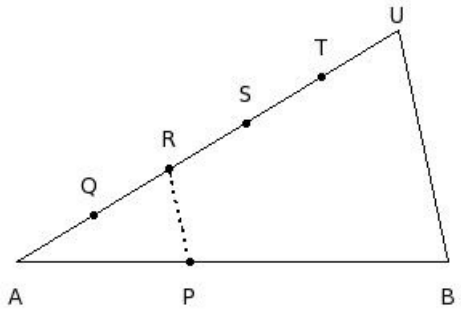
(i) IG (ii) GH (iii) JH (iv) GJ (v) KI

18. In the given figure $\triangle IJK$,
L is the mid-point of $\overline{IJ}$ and $\overline{LM} \parallel \overline{JK}$, then MK =



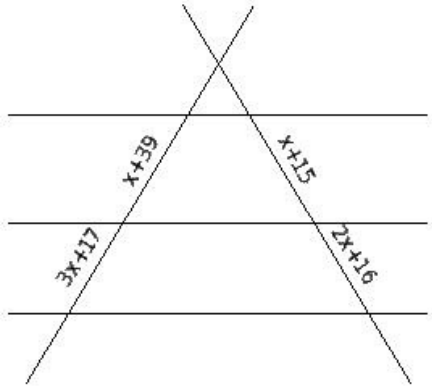
(i) LJ (ii) IM (iii) IJ (iv) IL (v) KI

19. In the given figure, if A, Q, R, S, T, U are equidistant and RP ∥ UB and AB = 27 cm. Find AP



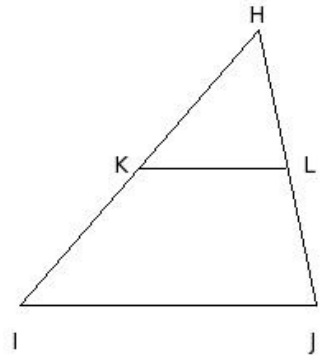
(i) 9.80 cm (ii) 8.80 cm (iii) 11.80 cm (iv) 10.80 cm (v) 12.80 cm

20. From the given figure and values, find x



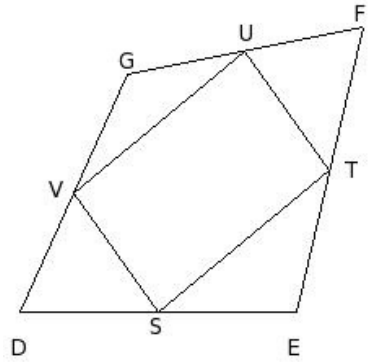
(i) (-7,41) (ii) (-8,42) (iii) (43,-7) (iv) (-9,41) (v) (-9,40)

21. In the given figure $\triangle HIJ$,
K is the mid-point of $\overline{HI}$ and $\overline{KL} \parallel \overline{IJ}$, then HK =



(i) HL (ii) IJ (iii) $\frac{HI}{2}$ (iv) $\frac{IJ}{2}$ (v) $\frac{JH}{2}$

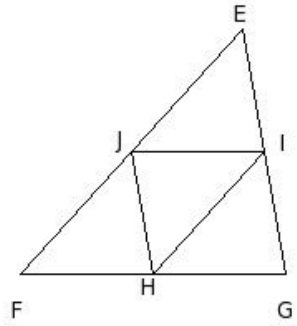
22. DEFG is a quadrilateral. S, T, U and V are mid-points of DE, EF, FG and GD respectively.If DF = 27 cm and EG = 18 cm, find the measure of the sides of STUV.



(i) 16 cm, 9 cm, 16 cm, 9 cm (ii) 14 cm, 9 cm, 14 cm, 9 cm (iii) 13.5 cm, 7 cm, 13.5 cm, 7 cm

(iv) 13.5 cm, 9 cm, 13.5 cm, 9 cm (v) 13.5 cm, 8 cm, 13.5 cm, 8 cm

23. In the given figure, $\triangle EFG$ is a triangle.
H, I & J are mid-points of FG, GE & EF respectively.
Given HI = 10 cm, IJ = 8 cm & JH = 8 cm, find the sides of the triangle.



(i) 20 cm, 15 cm & 16 cm (ii) 21 cm, 16 cm & 16 cm (iii) 20 cm, 16 cm & 16 cm (iv) 20 cm, 16 cm & 18 cm

(v) 18 cm, 16 cm & 16 cm

24. In the given figure, points K , L and M are the mid-points of sides IJ, JH and HI of △HIJ. Which of the following are true?

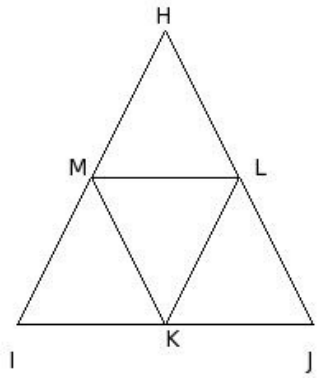
a) Area of $\triangle HIJ = \frac{1}{3}$ area of $\triangle KLM$

b) Area of trapezium IJLM is $\frac{1}{4}$ the area of $\triangle HIJ$

c) Area of trapezium IJLM is thrice the area of △HML

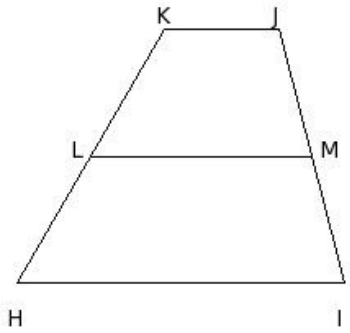
d) All four small triangles have equal areas

e) Area of △HIJ = 4 times area of △KLM



(i) {b,d} (ii) {a,c} (iii) {a,b,e} (iv) {c,d,e} (v) {a,c,d}

25. In the given figure, HIJK is a trapezium. L and M are mid-points of HK and IJ.Given LM = 13.5 cm and HI = 20 cm, find JK



(i) 9.0 cm (ii) 5.0 cm (iii) 6.0 cm (iv) 8.0 cm (v) 7.0 cm

Assignment Key

1) (ii)	2) (ii)	3) (v)	4) (i)	5) (iv)	6) (iii)
7) (iv)	8) (iv)	9) (ii)	10) (ii)	11) (iv)	12) (i)
13) (iii)	14) (ii)	15) (ii)	16) (ii)	17) (v)	18) (ii)
19) (iv)	20) (iv)	21) (iii)	22) (iv)	23) (iii)	24) (iv)
25) (v)					