EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Mid-Point and Intercept Theorems

Grade : ICSE Grade IX

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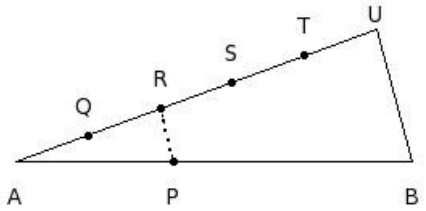
1. In the given figure, if A, Q, R, S, T, U are equidistant and RP ∥ UB and AB = 25 cm. Find AP



(i) 10.00 cm (ii) 8.00 cm (iii) 9.00 cm (iv) 11.00 cm (v) 12.00 cm

2. In the given figure, points J , K and L are the mid-points of sides HI, IG and GH of △GHI. Which of the following are true?

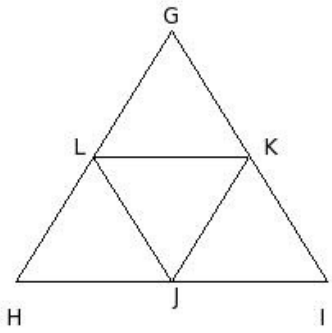
a) Area of △GHI = 4 times area of △JKL

b) Area of $\triangle GHI = \frac{1}{3}$ area of △JKL

c) Area of trapezium HIKL is $\frac{1}{4}$ the area of △GHI

d) All four small triangles have equal areas

e) Area of trapezium HIKL is thrice the area of △GLK

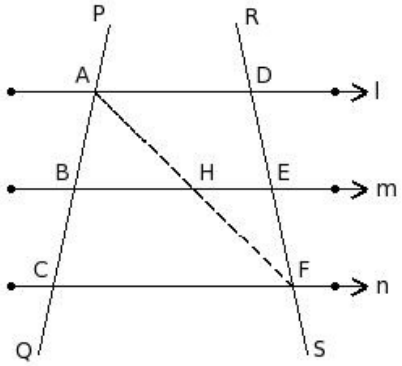


(i) {b,a,d} (ii) {b,a} (iii) {a,d,e} (iv) {c,d} (v) {b,c,e}

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

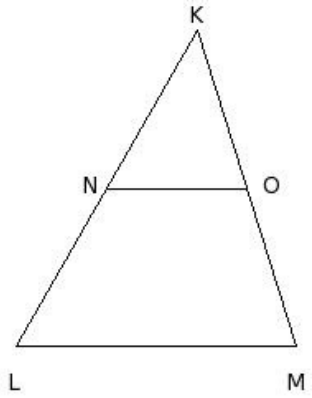
3. Two transversals PQ and RS intersect them at the points A , B , C and D , E , F respectively.

∠AFD =



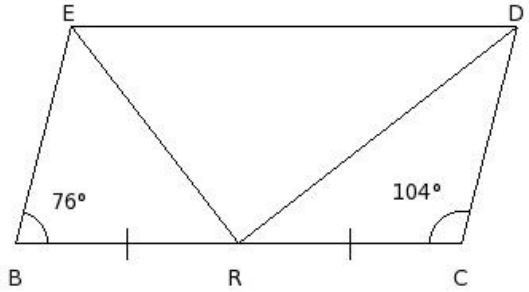
(i) ∠FEH (ii) ∠FDA (iii) ∠HFE (iv) ∠FAC (v) ∠HAB

4. In the given figure $\triangle KLM$,
N is the mid-point of $\overline{KL}$ and $\overline{NO} \parallel \overline{LM}$, then $KN =$



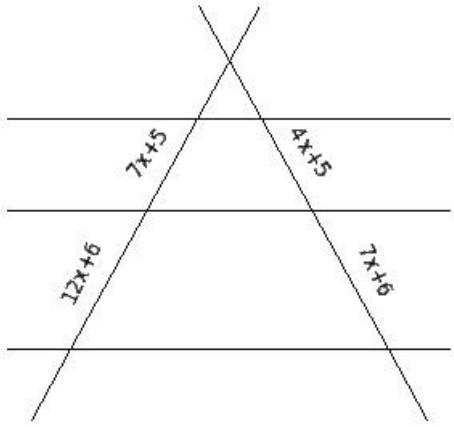
(i) $\frac{LM}{2}$ (ii) $\frac{MK}{2}$ (iii) $\frac{KL}{2}$ (iv) LM (v) KO

5. In the given figure, BCDE is a parallelogram such that R is the mid-point of BC and BC = 2EB. Find $\angle ERD$



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

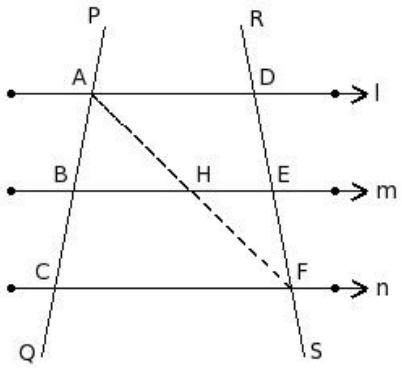
6. From the given figure and values, find x



(i) (2,7) (ii) (0,6) (iii) (0,7) (iv) (9,2) (v) (1,8)

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

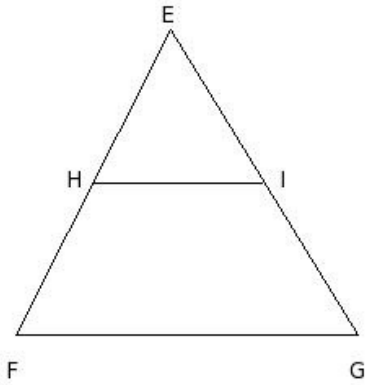
7. Two transversals PQ and RS intersect them at the points A , B , C and D , E , F respectively.
∠DAF =



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

In the given figure △EFG,

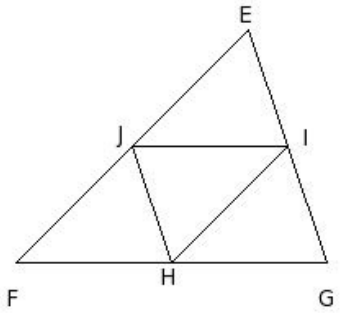
8. H is the mid-point of $\overline{EF}$ and $\overline{HI} \parallel \overline{FG}$, then IG =



(i) EH (ii) HF (iii) GE (iv) EI (v) EF

In the given figure, △EFG is a triangle.

9. H, I & J are mid-points of FG, GE & EF respectively.
Given HI = 10 cm, IJ = 10 cm & JH = 8 cm, find the sides of the triangle.

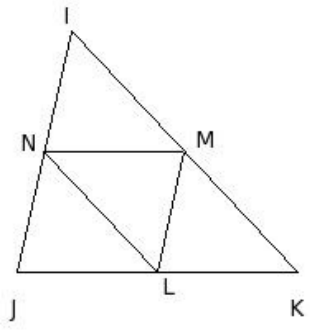


(i) 20 cm, 20 cm & 16 cm (ii) 20 cm, 19 cm & 16 cm (iii) 18 cm, 20 cm & 16 cm (iv) 20 cm, 20 cm & 18 cm

(v) 21 cm, 20 cm & 16 cm

In the given figure, $\triangle IJK$ is a triangle.

10. L, M & N are mid-points of JK, KI & IJ respectively.
Given LM = 8 cm, MN = 9 cm & NL = 10 cm, find the sides of the triangle.



(i) 17 cm, 18 cm & 20 cm (ii) 16 cm, 17 cm & 20 cm (iii) 14 cm, 18 cm & 20 cm (iv) 16 cm, 18 cm & 23 cm

(v) 16 cm, 18 cm & 20 cm

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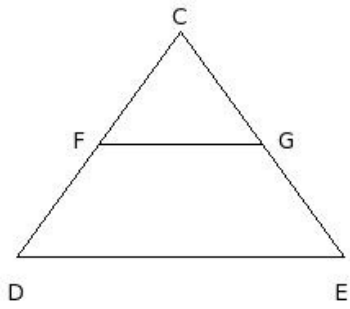
11. In the given figure $\triangle CDE$,
F is the mid-point of $\overline{CD}$ and $\overline{FG} \parallel \overline{DE}$, then CF =



(i) $\frac{CD}{2}$ (ii) DE (iii) $\frac{DE}{2}$ (iv) CG (v) $\frac{EC}{2}$

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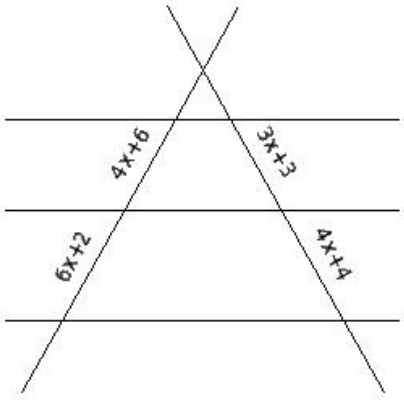
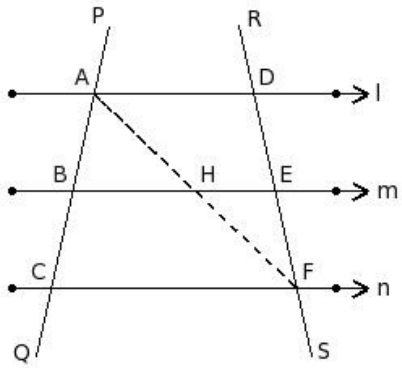
12. From the given figure and values, find x



(i) (-1,9) (ii) (-1,8) (iii) (1,9) (iv) (0,10) (v) (11,1)

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

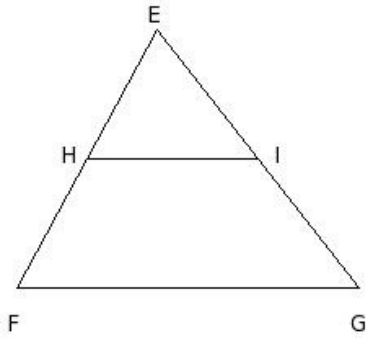
13. Two transversals PQ and RS intersect them at the points A , B , C and D , E , F respectively.
∠FAC =



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

In the given figure △EFG,

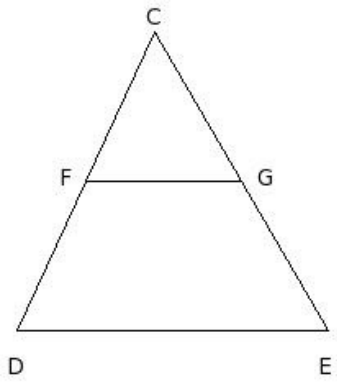
14. H is the mid-point of $\overline{EF}$ and $\overline{HI} \parallel \overline{FG}$, then EI =



(i) EH (ii) EF (iii) GE (iv) IG (v) HF

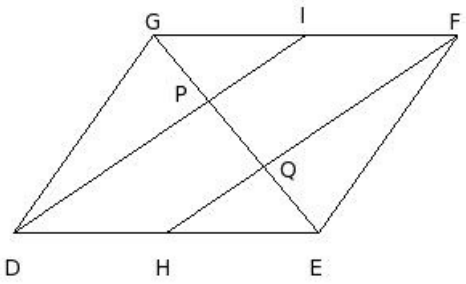
In the given figure △CDE,

15. F is the mid-point of $\overline{CD}$ and $\overline{FG} \parallel \overline{DE}$, then CF =



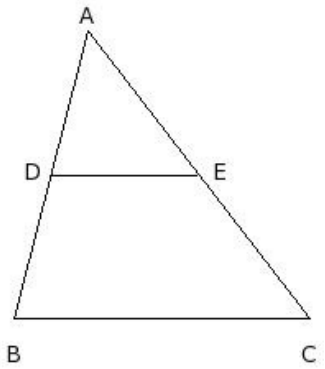
(i) EC (ii) FD (iii) CD (iv) GE (v) CG

16. In the given figure, DEFG is a parallelogram such that H and I are mid-points of sides DE & FG. DI meets EG at P and FH meets EG at Q. Given EG = 16 cm, find PQ



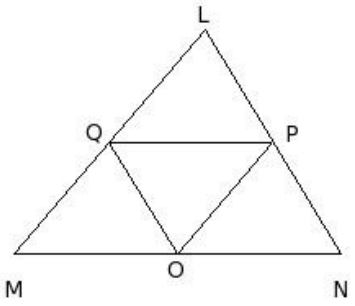
(i) 4.33 cm (ii) 7.33 cm (iii) 6.33 cm (iv) 5.33 cm (v) 3.33 cm

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



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

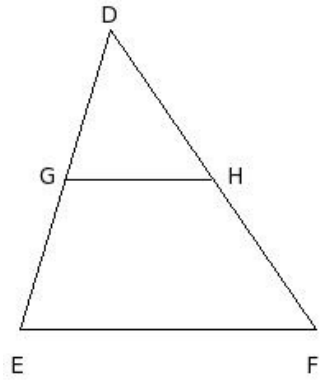
18. In the given figure, the area of the △LMN is x sq.cm. O,P,Q are the mid-points of the sides MN , NL and LM respectively. The area of the △OPQ is



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

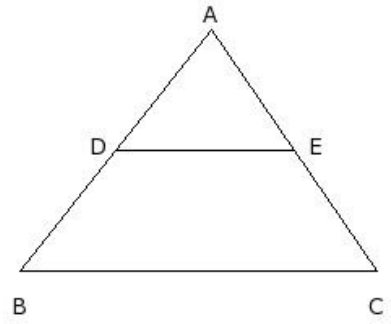
(v) $\frac{3}{4}$ of area of △LMN

19. In the given figure $\triangle DEF$,
G is the mid-point of $\overline{DE}$ and $\overline{GH} \parallel \overline{EF}$, then GE =



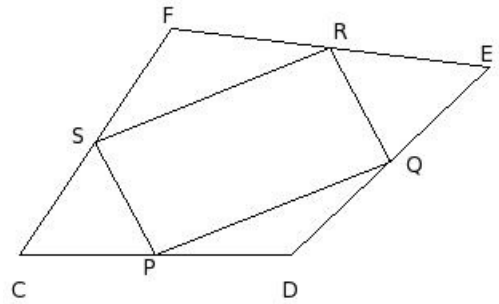
(i) DG (ii) HF (iii) DE (iv) DH (v) FD

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



(i) AE (ii) AB (iii) EC (iv) AD (v) CA

21. CDEF is a quadrilateral. P, Q, R and S are mid-points of CD, DE, EF and FC respectively.If CE = 32 cm and DF = 16 cm, find the measure of the sides of PQRS.



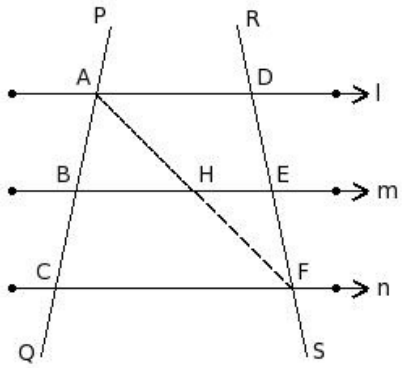
(i) 16 cm, 5 cm, 16 cm, 5 cm (ii) 16 cm, 7 cm, 16 cm, 7 cm (iii) 18 cm, 8 cm, 18 cm, 8 cm

(iv) 17 cm, 8 cm, 17 cm, 8 cm (v) 16 cm, 8 cm, 16 cm, 8 cm

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

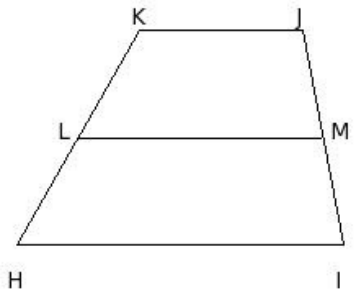
22. Two transversals PQ and RS intersect them at the points A , B , C and D , E , F respectively.

△FEH ~



(i) △DAE (ii) △ABH (iii) △DCF (iv) △ACF (v) △FDA

23. In the given figure, HIJK is a trapezium. L and M are mid-points of HK and IJ.Given HI = 20 cm and JK = 10 cm, find LM

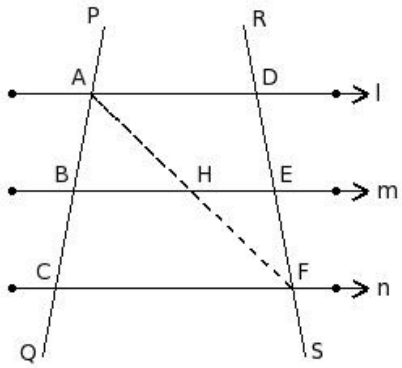


(i) 17.0 cm (ii) 16.0 cm (iii) 15.0 cm (iv) 13.0 cm (v) 14.0 cm

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

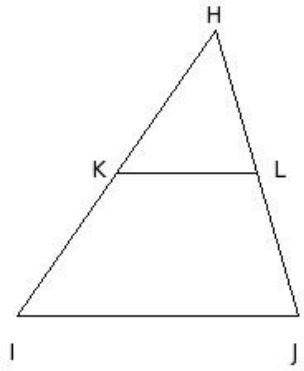
24. Two transversals PQ and RS intersect them at the points A , B , C and D , E , F respectively.

∠FEH =



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

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



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

Assignment Key

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