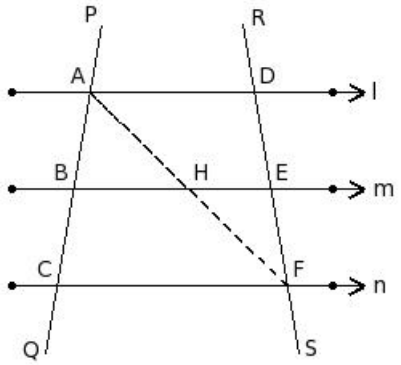
EduSahara™ Learning Center Assignment

Grade : Class IX, ICSE
Chapter : Mid-Point and Intercept Theorems
Name : Mid-Point and Intercept Theorems

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

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

   △FEH ~

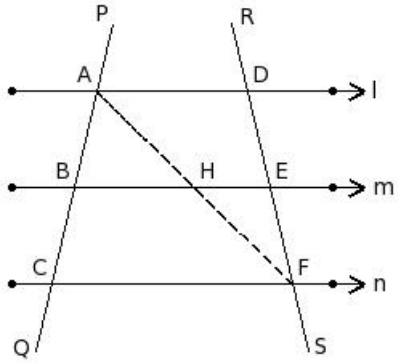


(i) △ACF (ii) △DAE (iii) △ABH (iv) △DCF (v) △FDA

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

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

   ∠FAC =

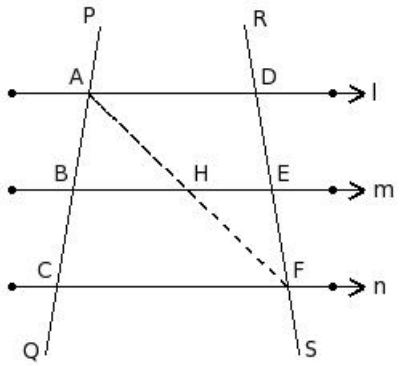


(i) ∠HAB (ii) ∠HFE (iii) ∠FEH (iv) ∠FDA (v) ∠AFD

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.

   ∠FDA =

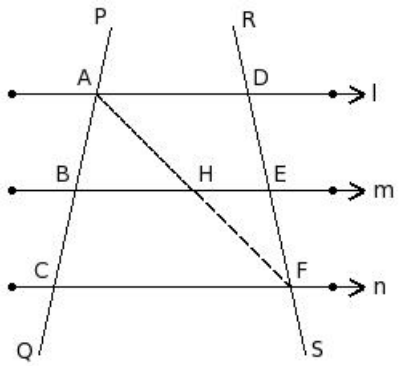


(i) ∠ABH (ii) ∠EHF (iii) ∠DAF (iv) ∠ACF (v) ∠FEH

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

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

∠EHF =



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

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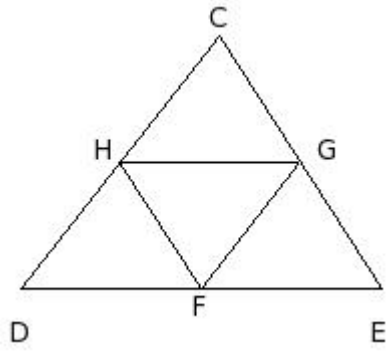
5. In the given figure, the area of the △CDE is x sq.cm. F,G,H are the mid-points of the sides DE , EC and CD respectively. The area of the △FGH is



(i) $\frac{3}{4}$ of area of △CDE

(ii) $\frac{1}{3}$ of area of △CDE

(iii) $\frac{1}{4}$ of area of △CDE

(iv) $\frac{2}{3}$ of area of △CDE

(v) $\frac{1}{2}$ of area of △CDE

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6. In the given figure, points N , O and P are the mid-points of sides LM, MK and KL of △KLM. Which of the following are true?

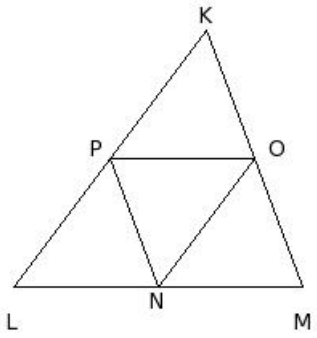
a) Area of trapezium LMOP is $\frac{1}{4}$ the area of △KLM

b) Area of trapezium LMOP is thrice the area of △KPO

c) Area of △KLM = 4 times area of △NOP

d) All four small triangles have equal areas

e) Area of △KLM = $\frac{1}{3}$ area of △NOP



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

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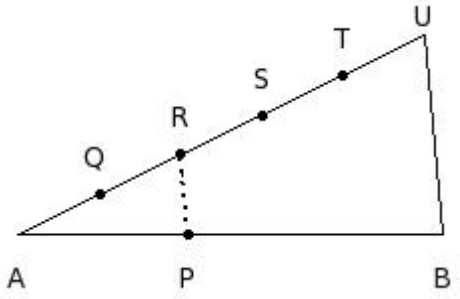
7. In the given figure, if A, Q, R, S, T, U are equidistant and RP ‖ UB and AB = 21 cm and AP = 8 cm. Find PB



(i) 13.00 cm (ii) 11.00 cm (iii) 14.00 cm (iv) 15.00 cm (v) 12.00 cm

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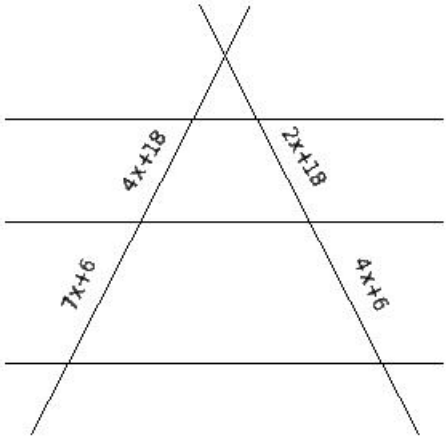
8. From the given figure and values, find x



(i) (0 , 21) (ii) (1 , 22) (iii) (2 , 21)

(iv) (23 , 2) (v) (0 , 20)

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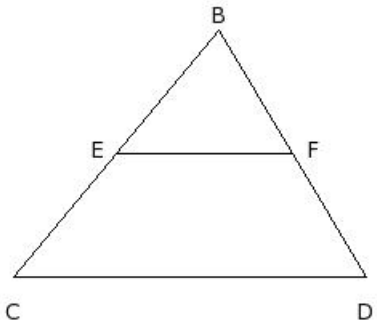
9. In the given figure $\triangle BCD$,

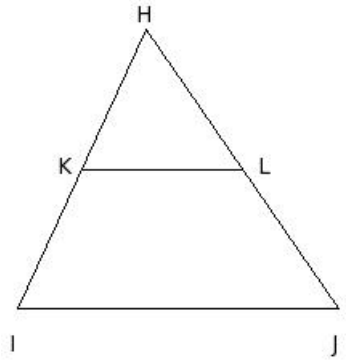
E is the mid-point of $\overline{BC}$ and $\overline{EF} \parallel \overline{CD}$, then BF =



(i) $\frac{BC}{2}$ (ii) $\frac{DB}{2}$ (iii) $\frac{CD}{2}$ (iv) CD (v) BE

In the given figure $\triangle HIJ$,

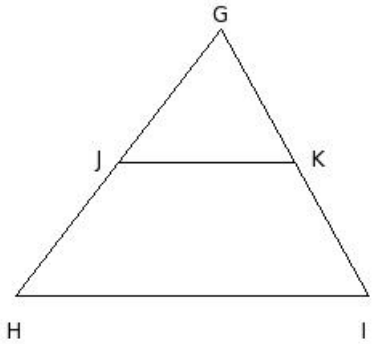
10. K is the mid-point of $\overline{HI}$ and $\overline{KL} \parallel \overline{IJ}$, then HK =



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

In the given figure $\triangle GHI$,

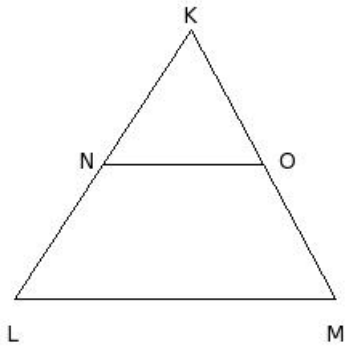
11. J is the mid-point of $\overline{GH}$ and $\overline{JK} \parallel \overline{HI}$, then GJ =



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

In the given figure $\triangle KLM$,

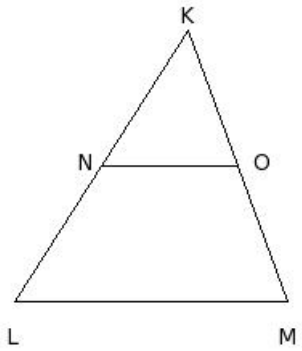
12. N is the mid-point of $\overline{KL}$ and $\overline{NO} \parallel \overline{LM}$, then NL =



(i) MK (ii) KL (iii) OM (iv) KO (v) KN

In the given figure $\triangle KLM$,

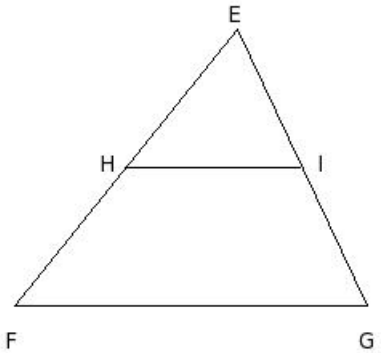
13. N is the mid-point of $\overline{KL}$ and $\overline{NO} \parallel \overline{LM}$, then KO =



(i) MK (ii) NL (iii) OM (iv) KN (v) KL

In the given figure $\triangle EFG$,

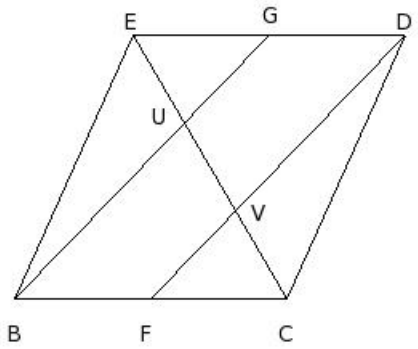
14. H is the mid-point of $\overline{EF}$ and $\overline{HI} \parallel \overline{FG}$, then IG =



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

In the given figure, BCDE is a parallelogram

15. such that F and G are mid-points of sides BC & DE .
BG meets CE at U and DF meets CE at V . Given CE = 19 cm , find CV



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

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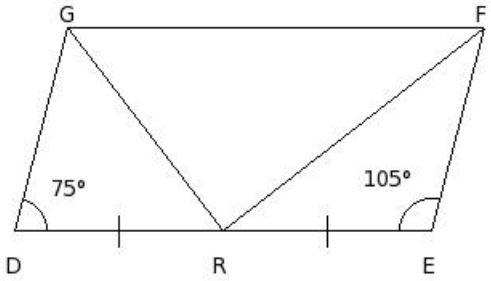
16. In the given figure, DEFG is a parallelogram such that R is the mid-point of DE and DE = 2GD. Find ∠GRF



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

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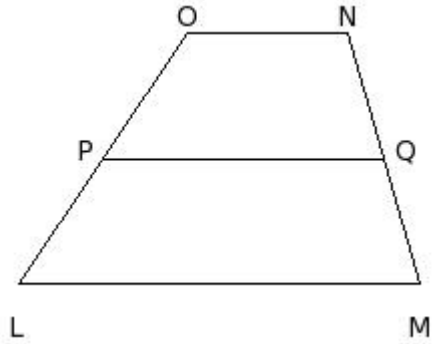
17. In the given figure, LMNO is a trapezium. P and Q are mid-points of LO and MN.Given LM = 20 cm and NO = 8 cm, find PQ



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

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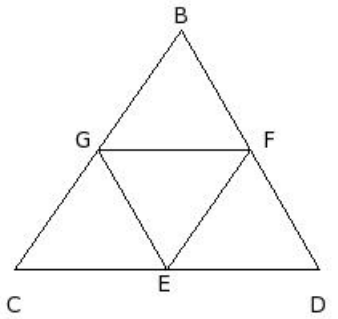
In the given figure, △BCD is a triangle.

18. E , F & G are mid-points of CD , DB & BC respectively.
Given EF = 9 cm , FG = 10 cm & GE = 9 cm , find the sides of the triangle.



(i) 15 cm , 20 cm & 18 cm

(ii) 19 cm , 20 cm & 18 cm

(iii) 18 cm , 20 cm & 21 cm

(iv) 18 cm , 20 cm & 18 cm

(v) 18 cm , 19 cm & 18 cm

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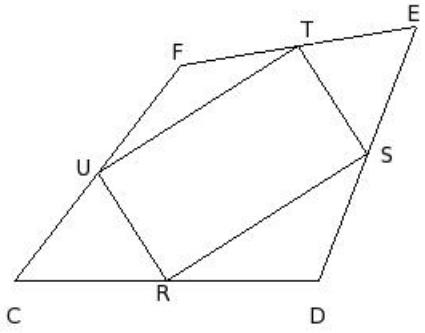
19. CDEF is a quadrilateral. R, S, T and U are mid-points of CD, DE, EF and FC respectively.If CE = 30 cm and DF = 16 cm, find the measure of the sides of RSTU.



(i) 15 cm , 8 cm , 15 cm , 8 cm

(ii) 15 cm , 5 cm , 15 cm , 5 cm

(iii) 16 cm , 8 cm , 16 cm , 8 cm

(iv) 17 cm , 8 cm , 17 cm , 8 cm

(v) 15 cm , 7 cm , 15 cm , 7 cm

Assignment Key

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