EduSahara™ Learning Center Assignment

Grade : Class VIII, ICSE
Chapter : Quadrilaterals
Name : Quadrilateral Angle Properties
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1. In parallelogram ABCD , if $\angle D = 90.4^\circ$, then find the value of $\angle B$

   (i) 89.40° (ii) 91.40° (iii) 92.40° (iv) 90.40° (v) 88.40°

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2. If the opposite angles of a parallelogram are supplementary, the measure of each of its angles is

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

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3. The sum of the interior angles of a quadrilateral is

   (i) 360° (ii) 90° (iii) 270° (iv) 180°

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4. If ABCD is an isosceles trapezium, $\angle A$ =

   (i) 90° (ii) $\angle C$ (iii) $\angle D$ (iv) $\angle B$

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5. DEFG is a rhombus in which $\angle D = 120^\circ$. $\overline{DF}$ is the diagonal. Then $\triangle DEF$ is

   (i) an equilateral triangle (ii) None of these
   (iii) an isosceles triangle (iv) a scalene triangle
   (v) an acute angled triangle

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6. HIJK is a rhombus in which $\angle H = 133^\circ$. $\overline{HJ}$ is the diagonal. Then $\triangle HIJ$ is

   (i) an acute angled triangle (ii) an equilateral triangle
   (iii) an isosceles triangle (iv) a scalene triangle
   (v) None of these

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7. The angles of a quadrilateral GHIJ are in the ratio 20 : 25 : 36 : 39 .
   Find the measure of each angle of the quadrilateral.

   (i) G = 59° , H = 73° , I = 109° , J = 119°

   (ii) G = 61° , H = 74° , I = 110° , J = 115°

   (iii) G = 62° , H = 74° , I = 106° , J = 118°

(iv) G = 58° , H = 77° , I = 107° , J = 118°

(v) G = 60° , H = 75° , I = 108° , J = 117°

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8. Two adjacent angles of a parallelogram IJKL are in the ratio 31 : 59 .
Find the measure of each of its angles.

(i) I = 64° , J = 117° , K = 60° , L = 119°

(ii) I = 60° , J = 120° , K = 61° , L = 119°

(iii) I = 63° , J = 117° , K = 64° , L = 116°

(iv) I = 61° , J = 116° , K = 63° , L = 120°

(v) I = 62° , J = 118° , K = 62° , L = 118°

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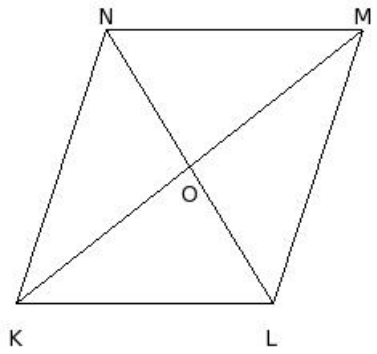
9. In the adjoining figure, KLMN is a parallelogram in which
∠NKM = 33.66° , ∠MKL = 38.2° , ∠NOM = 82.63° . Calculate ∠KLN



(i) 61.17° (ii) 59.17° (iii) 57.17° (iv) 58.17° (v) 60.17°

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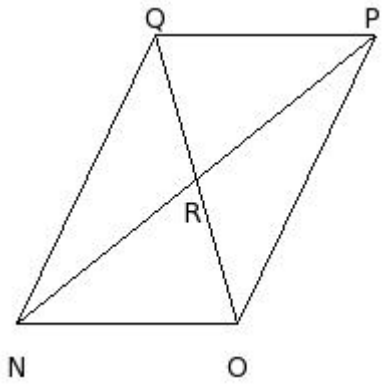
10. In the adjoining figure, NOPQ is a parallelogram in which
∠QNP = 25.43° , ∠PNO = 38.97° , ∠QRP = 66.86° . Calculate ∠PQO



(i) 75.17° (ii) 73.17° (iii) 72.17° (iv) 74.17° (v) 76.17°

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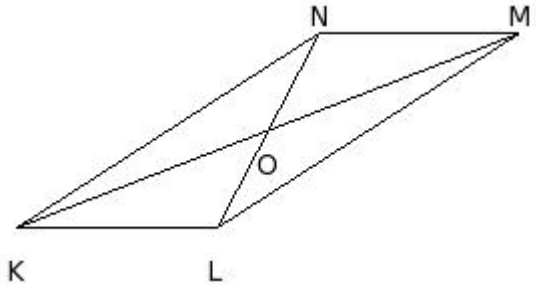
11. In the adjoining figure, KLMN is a parallelogram in which

∠NKM = 11.71° , ∠MKL = 21.01° , ∠NOM = 40.8° . Calculate ∠LMK



(i) 10.71° (ii) 13.71° (iii) 12.71° (iv) 9.71° (v) 11.71°

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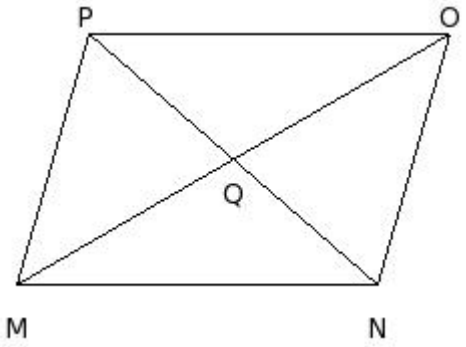
12. In the adjoining figure, MNOP is a parallelogram in which ∠PMO = 44.07° , ∠OMN = 29.86° , ∠PQO = 108.56° . Calculate ∠PNO



(i) 66.49° (ii) 62.49° (iii) 65.49° (iv) 64.49° (v) 63.49°

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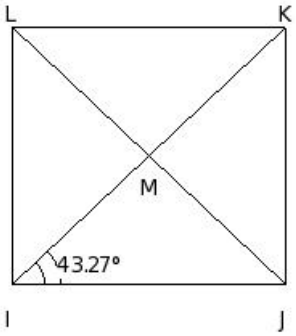
13. In the adjoining figure, IJKL is a rectangle. If ∠KIJ = 43.27° , find ∠LMK



(i) 92.48° (ii) 91.48° (iii) 94.48° (iv) 95.48° (v) 93.48°

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14. Three angles of quadrilateral measure 108.44°, 78.46° and 83.47° respectively. Find the measure of the fourth angle

(i) 88.63° (ii) 87.63° (iii) 90.63° (iv) 91.63° (v) 89.63°

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15. Three angles of a quadrilateral are equal and the fourth angle measure 122.88°. What is the measure of each of the equal angles?

(i) 77.04° (ii) 80.04° (iii) 79.04° (iv) 78.04° (v) 81.04°

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16. Two angles of a quadrilateral are of measure 74.18° and 87.48° respectively and the other two angles are equal. Find the measure of each of the equal angles.

(i) 97.17° (ii) 98.17° (iii) 100.17° (iv) 99.17° (v) 101.17°

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17. A quadrilateral has three acute angles, each measuring 65°. What is the measure of its fourth angle?

(i) 167.00° (ii) 164.00° (iii) 166.00° (iv) 165.00° (v) 163.00°

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18. One angle of a parallelogram measures J = 61.28° .
Find the measure of each of its remaining angles.

(i) K = 117.72° , L = 60.28° , M = 117.72°

(ii) K = 118.72° , L = 61.28° , M = 118.72°

(iii) K = 120.72° , L = 63.28° , M = 120.72°

(iv) K = 116.72° , L = 59.28° , M = 116.72°

(v) K = 119.72° , L = 62.28° , M = 119.72°

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19. Two adjacent angles of a parallelogram are in the ratio 7 : 29 .
Find the measure of each of its angles.

(i) A = 34° , B = 143° , C = 36° , D = 147°

(ii) A = 33° , B = 147° , C = 34° , D = 146°

(iii) A = 36° , B = 144° , C = 37° , D = 143°

(iv) A = 37° , B = 144° , C = 33° , D = 146°

(v) A = 35° , B = 145° , C = 35° , D = 145°

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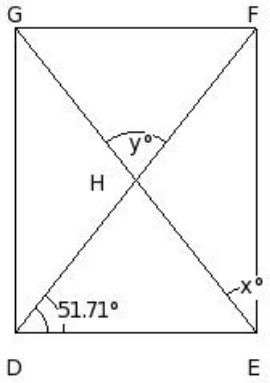
20. In the figure given below, DEFG is a rectangle. Find the values of x and y



(i) x = 36.29°, y = 74.58°

(ii) x = 37.29°, y = 75.58°

(iii) x = 40.29°, y = 78.58°

(iv) x = 38.29°, y = 76.58°

(v) x = 39.29°, y = 77.58°

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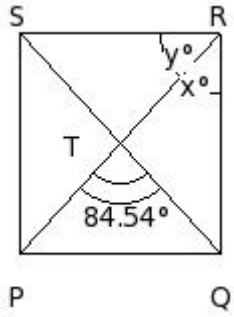
21. In the figure given below, PQRS is a rectangle. Find the values of x and y



(i) x = 40.27°, y = 45.73°

(ii) x = 42.27°, y = 47.73°

(iii) x = 44.27°, y = 49.73°

(iv) x = 43.27°, y = 48.73°

(v) x = 41.27°, y = 46.73°

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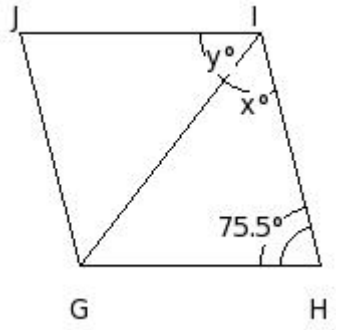
22. In the figure given below, GHIJ is a rhombus. Find the values of x and y



(i) x = 52.25°, y = 52.25°

(ii) x = 54.25°, y = 54.25°

(iii) x = 51.25°, y = 51.25°

(iv) x = 50.25°, y = 50.25°

(v) x = 53.25°, y = 53.25°

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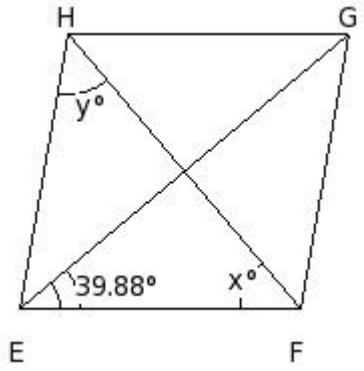
23. In the figure given below, EFGH is a rhombus. Find the values of x and y



(i) x = 50.12°, y = 50.12°

(ii) x = 51.12°, y = 51.12°

(iii) x = 49.12°, y = 49.12°

(iv) x = 48.12°, y = 48.12°

(v) x = 52.12°, y = 52.12°

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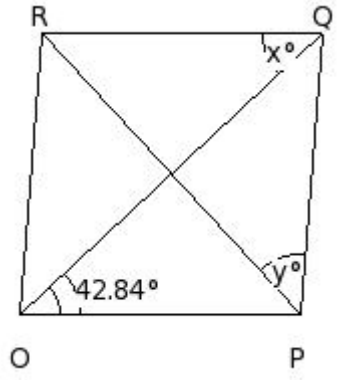
24. In the figure given below, OPQR is a rhombus. Find the values of x and y



(i) x = 43.84°, y = 48.16°

(ii) x = 44.84°, y = 49.16°

(iii) x = 41.84°, y = 46.16°

(iv) x = 42.84°, y = 47.16°

(v) x = 40.84°, y = 45.16°

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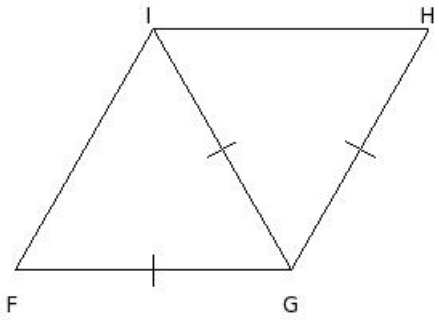
25. One of the diagonals of a rhombus is equal to one of its sides. Find the angles of the rhombus



(i) F = 59° , G = 118° , H = 61° , I = 122°

(ii) F = 58° , G = 122° , H = 59° , I = 121°

(iii) F = 61° , G = 119° , H = 62° , I = 118°

(iv) F = 60° , G = 120° , H = 60° , I = 120°

(v) F = 62° , G = 119° , H = 58° , I = 121°

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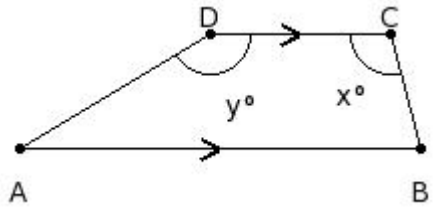
26. In the adjoining figure, ABCD is a trapezium in which $\overline{AB} \parallel \overline{CD}$.

If x = 104.74° and y = 149.04° , find the measures of ∠A and ∠B .



(i) A = 31.96° , B = 76.26°

(ii) A = 32.96° , B = 77.26°

(iii) A = 30.96° , B = 75.26°

(iv) A = 29.96° , B = 74.26°

(v) A = 28.96° , B = 73.26°

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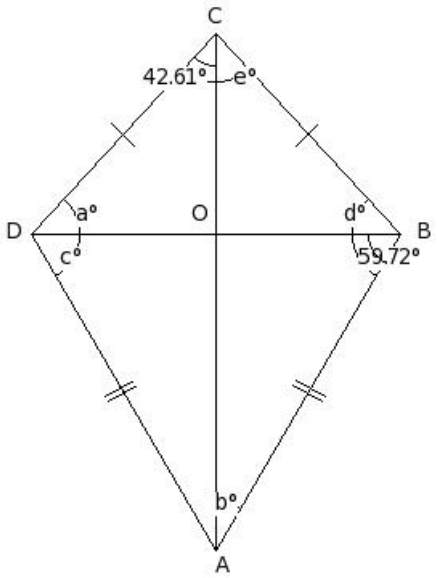
27. In the adjoining figure, ABCD is a kite in which AB = DA , BC = CD and the diagonals $\overline{BD}$ and $\overline{AC}$ intersect at O .

If ∠OCD = 42.61° and ∠ABO = 59.72°, find the measure of each of the angles marked a,b,c,d and e.



(i) a = 47.39° , b = 31.28° , c = 58.72° , d = 49.39° , e = 42.61°

(ii) a = 47.39° , b = 31.28° , c = 58.72° , d = 47.39° , e = 42.61°

(iii) a = 47.39° , b = 30.28° , c = 59.72° , d = 47.39° , e = 42.61°

(iv) a = 47.39° , b = 31.28° , c = 58.72° , d = 49.39° , e = 40.61°

(v) a = 47.39° , b = 31.28° , c = 59.72° , d = 47.39° , e = 42.61°

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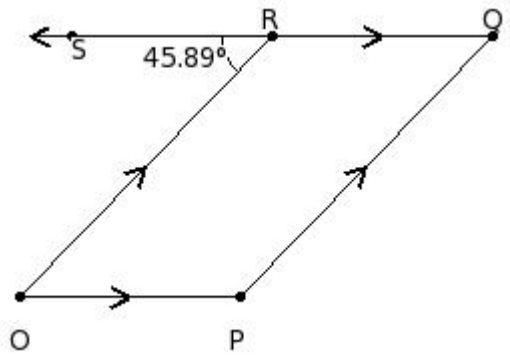
28. In the adjoining figure, side QR of parallelogram OPQR has been produced to S. If ∠ORS = 45.89° , find the measure of each angle of the parallelogram.



(i) O = 46.89° , P = 133.11° , Q = 47.89° , R = 132.11°

(ii) O = 45.89° , P = 134.11° , Q = 45.89° , R = 134.11°

(iii) O = 44.89° , P = 132.11° , Q = 46.89° , R = 136.11°

(iv) O = 47.89° , P = 133.11° , Q = 43.89° , R = 135.11°

(v) O = 43.89° , P = 136.11° , Q = 44.89° , R = 135.11°

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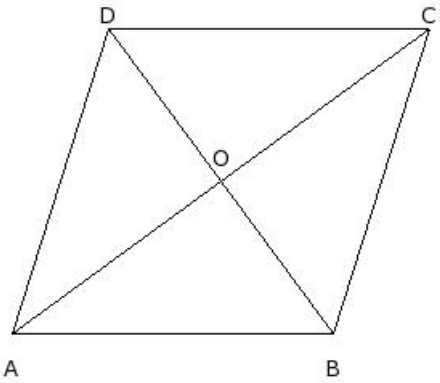
29. In the adjoining figure, ABCD is a rhombus whose diagonals intersect at O .
If ∠OAB : ∠ABO = 2 : 3 , find the angles of △OAB .



(i) O = 88° , A = 38° , B = 54°

(ii) O = 90° , A = 36° , B = 54°

(iii) O = 90° , A = 34° , B = 56°

(iv) O = 92° , A = 36° , B = 52°

(v) O = 88° , A = 36° , B = 56°

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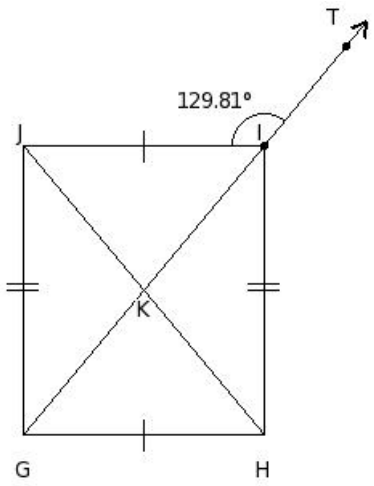
30. In the given figure, GHIJ is a rectangle whose diagonals intersect at K .
Diagonal GI is produced to T and ∠JIT = 129.81° . Find the angles of △KGH .



(i) K = 81.62° , G = 50.19° , H = 48.19°

(ii) K = 77.62° , G = 52.19° , H = 50.19°

(iii) K = 79.62° , G = 48.19° , H = 52.19°

(iv) K = 79.62° , G = 50.19° , H = 50.19°

(v) K = 77.62° , G = 50.19° , H = 52.19°

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31. The measures of three angles of a quadrilateral are 83.47° , 95.74° and 78.46° . Find the fourth angle

(i) 107.33° (ii) 112.33° (iii) 102.33° (iv) 117.33° (v) 132.33°

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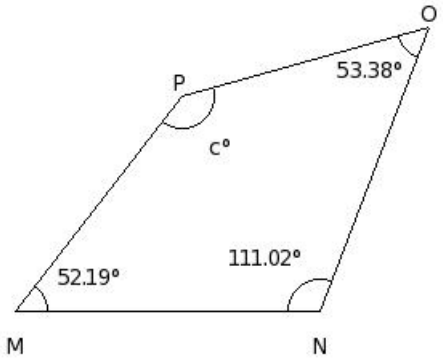
32. Find the missing angle in the given quadrilateral



(i) 153.41° (ii) 143.41° (iii) 173.41° (iv) 148.41° (v) 158.41°

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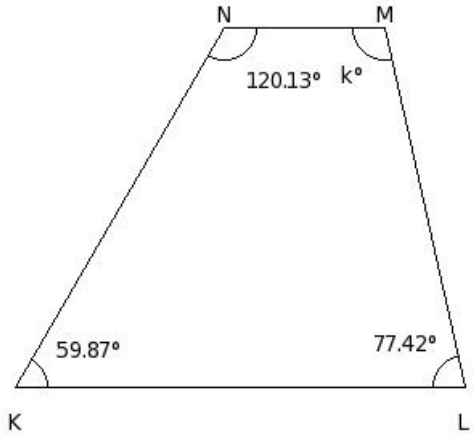
33. Find the missing angle in the given trapezium



(i) 112.58° (ii) 102.58° (iii) 117.58° (iv) 107.58° (v) 132.58°

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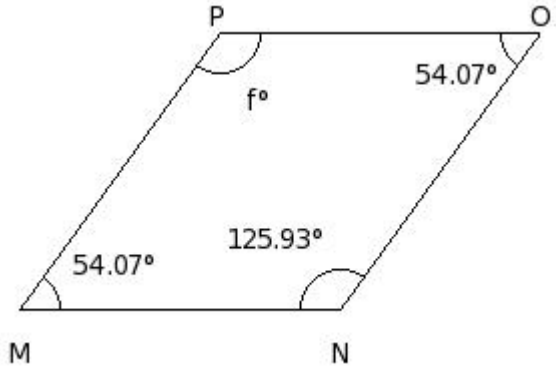
34. Find the missing angle in the given parallelogram



(i) 155.93° (ii) 125.93° (iii) 135.93° (iv) 140.93° (v) 130.93°

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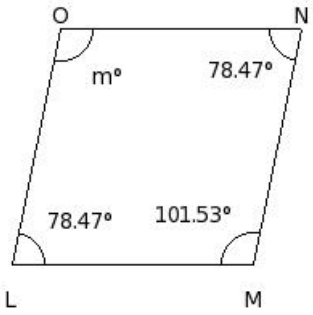
35. Find the missing angle in the given rhombus



(i) 106.53° (ii) 131.53° (iii) 111.53° (iv) 116.53° (v) 101.53°

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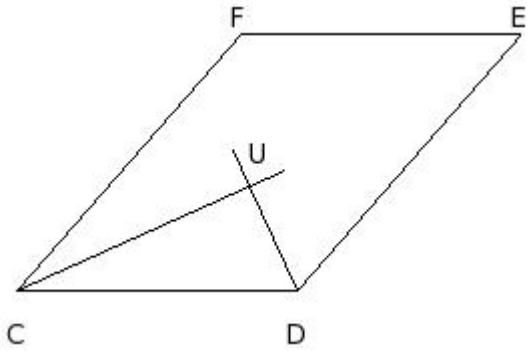
36. In the given figure, CDEF is a parallelogram.
If CU and DU are bisector of ∠C & ∠D , find ∠U



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

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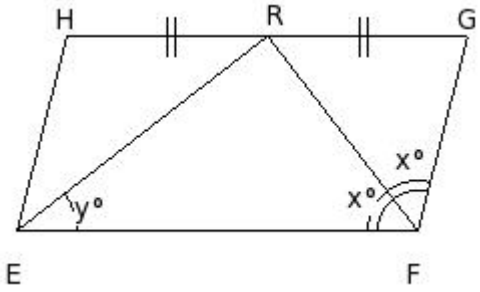
37. In the given figure, EFGH is a parallelogram. R is the mid-point of GH.
FR bisects ∠F . If x = 52° , find angle 'y'.



(i) 39° (ii) 40° (iii) 38° (iv) 37° (v) 36°

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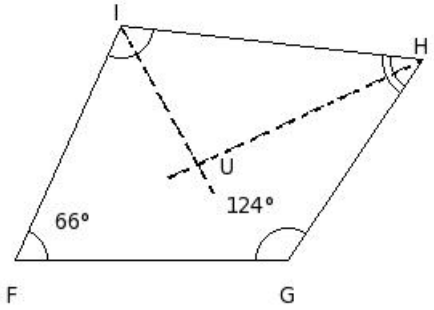
38. In the given figure, FGHI is a quadrilateral. UI and UH are bisectors of ∠I & ∠H meeting at U.
Find ∠HUI



(i) 96.0° (ii) 93.0° (iii) 94.0° (iv) 95.0° (v) 97.0°

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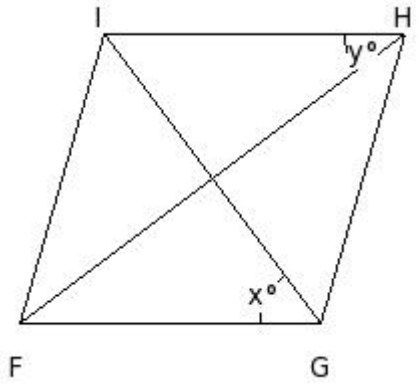
39. In the given figure, FGHI is a rhombus. Given x = 53°, find the value of 'y'.



(i) 36° (ii) 35° (iii) 38° (iv) 37° (v) 39°

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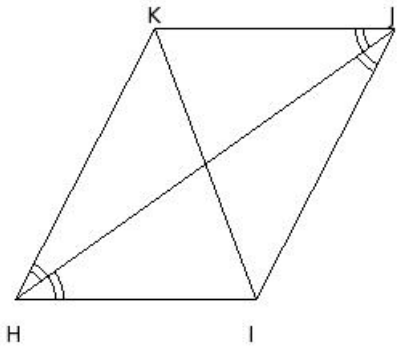
40. In the given figure, HIJK is a parallelogram. HJ bisects ∠H & ∠J.
Given HJ = 15 cm and IK = 10 cm , find HI



(i) 9.01 cm (ii) 11.01 cm (iii) 7.01 cm (iv) 10.01 cm (v) 8.01 cm

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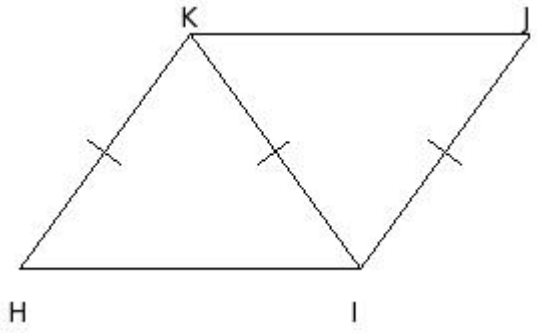
41. In the given figure, HIJK is a parallelogram. IK is the diagonal
such that HK = IK = IJ . Given ∠H = 54° , find ∠KIJ



(i) 74° (ii) 70° (iii) 72° (iv) 71° (v) 73°

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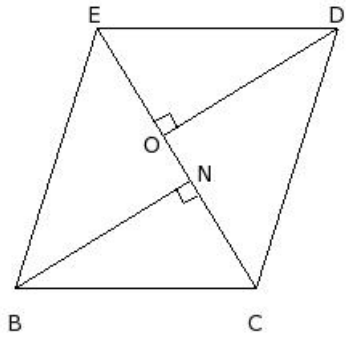
42. In the given figure, BCDE is a parallelogram. BN and DO are perpendicular to the diagonal CE. Given ∠NBC = 32°, find ∠DEC



(i) 60° (ii) 58° (iii) 59° (iv) 57° (v) 56°

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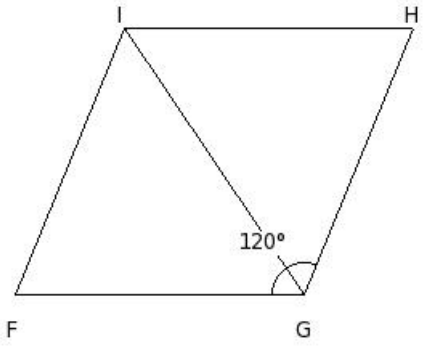
43. In the given figure, FGHI is a rhombus such that ∠G = 120°. Then △FGI is



(i) Right angled triangle
(ii) Isosceles triangle
(iii) Equilateral triangle
(iv) Obtuse angled triangle

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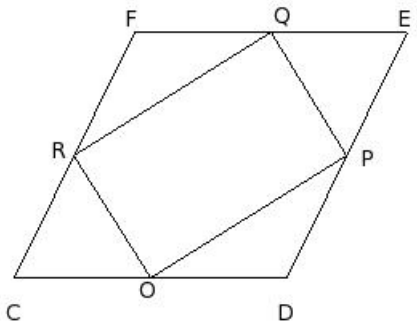
44. CDEF is a rhombus. O, P, Q and R are mid-points of sides CD, DE, EF and FC. Find ∠PQR



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

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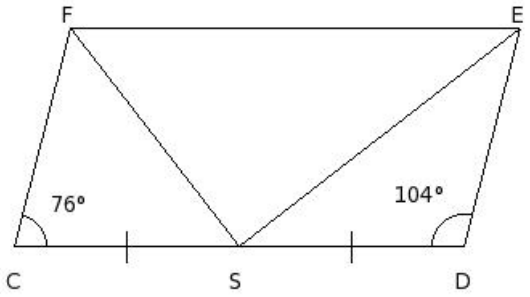
45. In the given figure, CDEF is a parallelogram such that S is the mid-point of CD and CD = 2FC. Find ∠FSE



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

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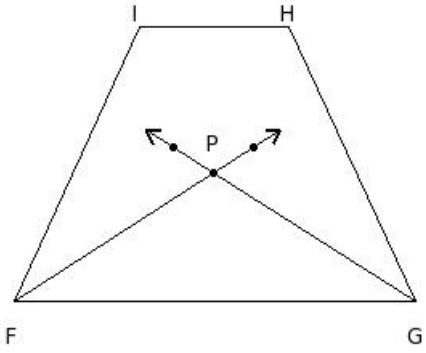
46. FGHI is an isosceles trapezium. FP and GP are angular bisector of ∠F & ∠G. If ∠F = 65°, find ∠FPG



(i) 116° (ii) 115° (iii) 114° (iv) 113° (v) 117°

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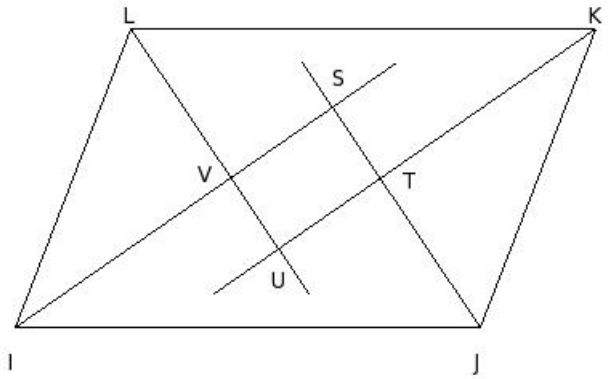
47. In the given figure, IJKL is a parallelogram. The bisector of the angles I, J, K & L intersect at S, T, U & V to form a quadrilateral. Find ∠STU



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

Assignment Key

1) (iv)
2) (ii)
3) (i)
4) (iv)
5) (i)
6) (iii)
7) (v)
8) (v)
9) (ii)
10) (iv)
11) (v)
12) (iv)
13) (v)
14) (v)
15) (iii)
16) (iv)
17) (iv)
18) (ii)
19) (v)
20) (iv)
21) (ii)
22) (i)
23) (i)
24) (iv)
25) (iv)
26) (iii)
27) (iii)
28) (ii)
29) (ii)
30) (iv)
31) (iii)
32) (ii)
33) (ii)
34) (ii)
35) (v)
36) (ii)
37) (iii)
38) (iv)
39) (iv)

40) (i)
41) (iii)
42) (ii)
43) (iii)
44) (iii)
45) (i)
46) (ii)
47) (iv)