EduSahara™ Assignment

Name : Quadrilateral Angle Properties

Chapter : Quadrilaterals

Grade : ICSE Grade VII

1. In parallelogram ABCD, if ∠C = 60°, then find the value of ∠B

   (i) 121.00° (ii) 122.00° (iii) 119.00° (iv) 120.00° (v) 118.00°

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

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

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

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

4. If ABCD is an isosceles trapezium, ∠B =

   (i) ∠D (ii) ∠C (iii) 90° (iv) ∠A

5. CDEF is a rhombus in which ∠C = 120° .
   $\overline{DF}$
   is the diagonal. Then △CDE is

   (i) None of these (ii) an equilateral triangle (iii) an obtuse angled triangle (iv) an isosceles triangle

   (v) a scalene triangle

6. NOPQ is a rhombus in which ∠N = 121° .
   $\overline{OQ}$
   is the diagonal. Then △NOP is

   (i) a scalene triangle (ii) an obtuse angled triangle (iii) an isosceles triangle (iv) None of these

   (v) an equilateral triangle

7. The angles of a quadrilateral KLMN are in the ratio 16 : 5 : 22 : 29. Find the measure of each angle of the quadrilateral.

   (i) K=80°,L=25°,M=110°,N=145° (ii) K=82°,L=24°,M=108°,N=146° (iii) K=79°,L=23°,M=111°,N=147°

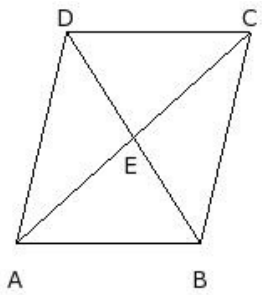
   (iv) K=78°,L=27°,M=109°,N=146° (v) K=81°,L=24°,M=112°,N=143°

8. Two adjacent angles of a parallelogram KLMN are in the ratio 21 : 39. Find the measure of each of its angles.

   (i) K=62°,L=115°,M=64°,N=119° (ii) K=61°,L=119°,M=62°,N=118° (iii) K=65°,L=116°,M=61°,N=118°

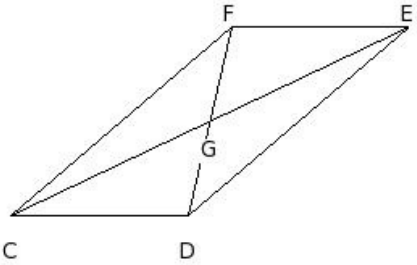
   (iv) K=63°,L=117°,M=63°,N=117° (v) K=64°,L=116°,M=65°,N=115°

9. In the adjoining figure, ABCD is a parallelogram in which ∠DAC = 34.62°, ∠CAB = 41.99°, ∠DEC = 80.42°. Calculate ∠ABD



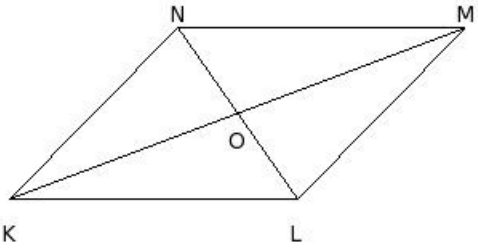
(i) 59.59° (ii) 56.59° (iii) 57.59° (iv) 58.59° (v) 55.59°

10. In the adjoining figure, CDEF is a parallelogram in which ∠FCE = 15.25°, ∠ECD = 25.24°, ∠FGE = 51.2°. Calculate ∠EFD



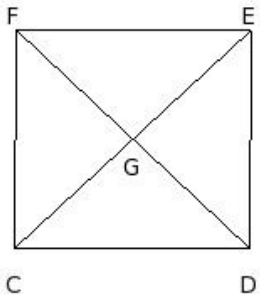
(i) 103.56° (ii) 102.56° (iii) 105.56° (iv) 104.56° (v) 101.56°

11. In the adjoining figure, KLMN is a parallelogram in which ∠NKM = 25.07°, ∠MKL = 20.47°, ∠NOM = 103.73°. Calculate ∠LMK



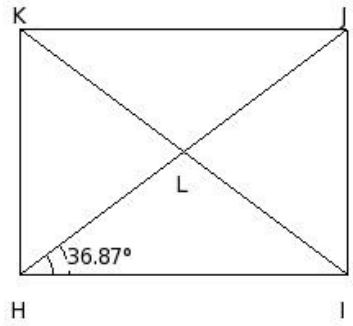
(i) 25.07° (ii) 27.07° (iii) 24.07° (iv) 23.07° (v) 26.07°

12. In the adjoining figure, CDEF is a parallelogram in which ∠FCE = 46.68°, ∠ECD = 42.88°, ∠FGE = 94.24°. Calculate ∠FDE



(i) 49.56° (ii) 46.56° (iii) 45.56° (iv) 47.56° (v) 48.56°

13. In the adjoining figure, HIJK is a rectangle. If ∠JHI = 36.87°, find ∠HIK



(i) 34.87° (ii) 38.87° (iii) 37.87° (iv) 36.87° (v) 35.87°

14. Three angles of quadrilateral measure 74.54°, 81.28° and 83.19° respectively. Find the measure of the fourth angle

(i) 122.99° (ii) 120.99° (iii) 118.99° (iv) 119.99° (v) 121.99°

15. Three angles of a quadrilateral are equal and the fourth angle measure 77.97°. What is the measure of each of the equal angles?

(i) 96.01° (ii) 92.01° (iii) 94.01° (iv) 95.01° (v) 93.01°

16. Two angles of a quadrilateral are of measure 112.41° and 97.74° respectively and the other two angles are equal. Find the measure of each of the equal angles.

(i) 74.93° (ii) 76.93° (iii) 72.93° (iv) 73.93° (v) 75.93°

17. A quadrilateral has three acute angles, each measuring 43°. What is the measure of its fourth angle?

(i) 231.00° (ii) 229.00° (iii) 232.00° (iv) 230.00° (v) 233.00°

18. One angle of a parallelogram measures G = 59.17°.
Find the measure of each of its remaining angles.

(i) H=120.83°,I=59.17°,J=120.83° (ii) H=121.83°,I=60.17°,J=121.83°

(iii) H=122.83°,I=61.17°,J=122.83° (iv) H=118.83°,I=57.17°,J=118.83°

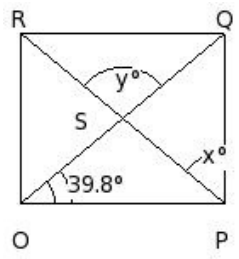
(v) H=119.83°,I=58.17°,J=119.83°

19. Two adjacent angles of a parallelogram are in the ratio 5 : 5.
Find the measure of each of its angles.

(i) A=92°,B=89°,C=88°,D=91° (ii) A=90°,B=90°,C=90°,D=90° (iii) A=88°,B=92°,C=89°,D=91°

(iv) A=89°,B=88°,C=91°,D=92° (v) A=91°,B=89°,C=92°,D=88°

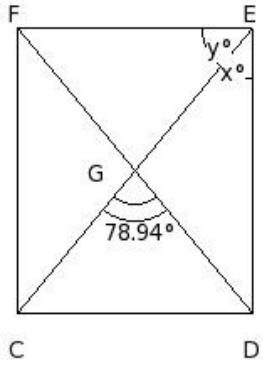
20. In the figure given below, OPQR is a rectangle. Find the values of x and y



(i) x=50.2°,y=100.4° (ii) x=49.2°,y=99.4° (iii) x=51.2°,y=101.4° (iv) x=52.2°,y=102.4°

(v) x=48.2°,y=98.4°

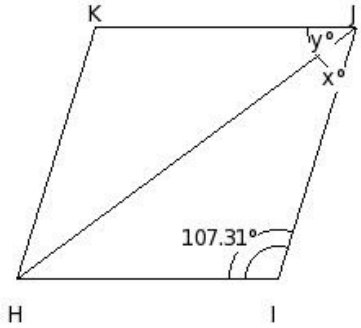
21. In the figure given below, CDEF is a rectangle. Find the values of x and y



(i) x=37.47°,y=48.53° (ii) x=38.47°,y=49.53° (iii) x=40.47°,y=51.53° (iv) x=39.47°,y=50.53°

(v) x=41.47°,y=52.53°

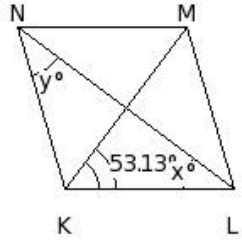
22. In the figure given below, HIJK is a rhombus. Find the values of x and y



(i) x=35.34°,y=35.34° (ii) x=37.34°,y=37.34° (iii) x=38.34°,y=38.34° (iv) x=34.34°,y=34.34°

(v) x=36.34°,y=36.34°

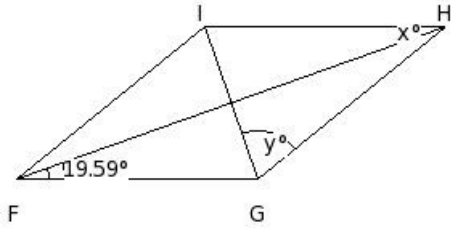
23. In the figure given below, KLMN is a rhombus. Find the values of x and y



(i) x=36.87°,y=36.87° (ii) x=38.87°,y=38.87° (iii) x=35.87°,y=35.87° (iv) x=34.87°,y=34.87°

(v) x=37.87°,y=37.87°

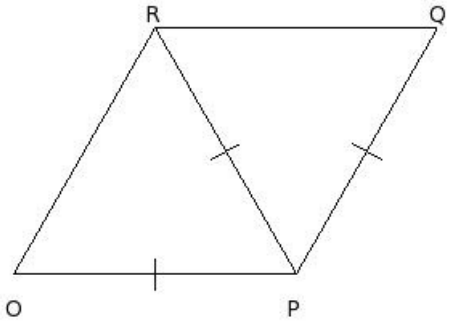
24. In the figure given below, FGHI is a rhombus. Find the values of x and y



(i) x=19.59°,y=70.41° (ii) x=18.59°,y=69.41° (iii) x=17.59°,y=68.41° (iv) x=21.59°,y=72.41°

(v) x=20.59°,y=71.41°

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

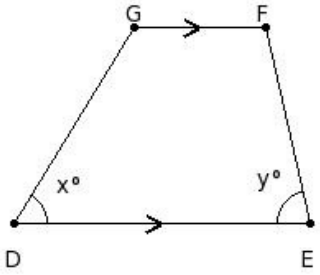


(i) $O=61°, P=119°, Q=62°, R=118°$ (ii) $O=59°, P=118°, Q=61°, R=122°$

(iii) $O=60°, P=120°, Q=60°, R=120°$ (iv) $O=62°, P=119°, Q=58°, R=121°$

(v) $O=58°, P=122°, Q=59°, R=121°$

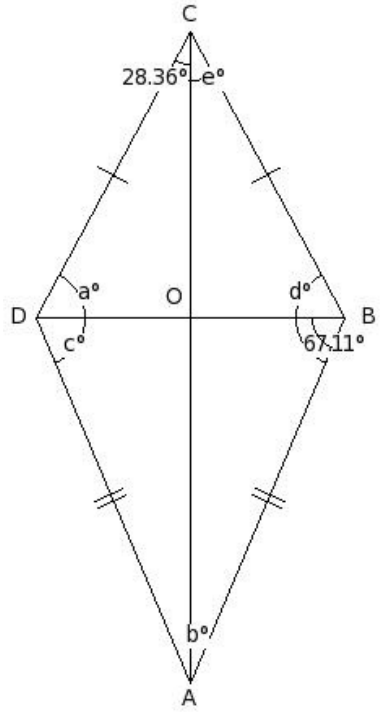
26. In the adjoining figure, DEFG is a trapezium in which $\overline{DE} \parallel \overline{FG}$.
If $x = 58.47°$ and $y = 77.22°$, find the measures of $\angle F$ and $\angle G$.



(i) $F=104.78°, G=123.53°$ (ii) $F=103.78°, G=122.53°$ (iii) $F=101.78°, G=120.53°$

(iv) $F=100.78°, G=119.53°$ (v) $F=102.78°, G=121.53°$

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 = 28.36° and ∠ABO = 67.11°, find the measure of each of the angles marked a,b,c,d and e.



(i) a = 61.64° , b = 23.89° , c = 67.11° , d = 61.64° , e = 28.36°

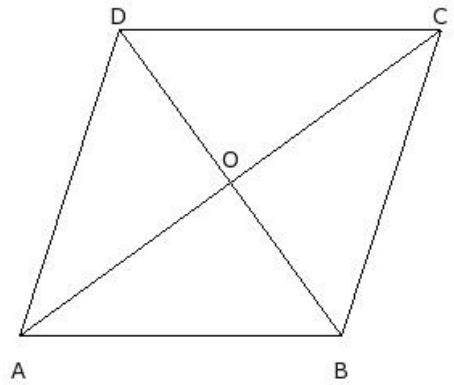
(ii) a = 61.64° , b = 23.89° , c = 66.11° , d = 61.64° , e = 28.36°

(iii) a = 61.64° , b = 22.89° , c = 67.11° , d = 61.64° , e = 28.36°

(iv) a = 61.64° , b = 23.89° , c = 66.11° , d = 63.64° , e = 26.36°

(v) a = 61.64° , b = 23.89° , c = 66.11° , d = 63.64° , e = 28.36°

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



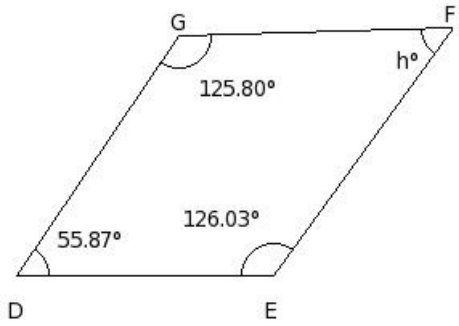
(i) O=88°,A=36°,B=56° (ii) O=90°,A=36°,B=54° (iii) O=92°,A=36°,B=52° (iv) O=88°,A=38°,B=54°

(v) O=90°,A=34°,B=56°

29. The measures of three angles of a quadrilateral are 47.91° , 133.77° and 62.97° . Find the fourth angle

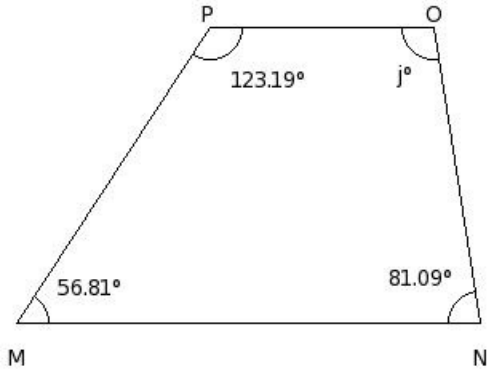
(i) 145.35° (ii) 115.35° (iii) 120.35° (iv) 130.35° (v) 125.35°

30. Find the missing angle in the given quadrilateral



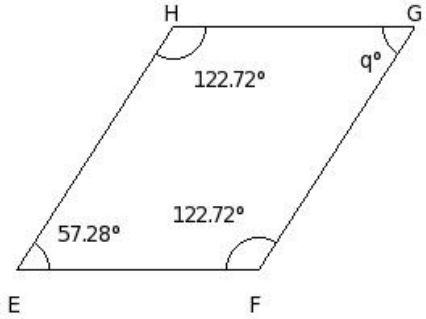
(i) 82.3° (ii) 62.3° (iii) 52.3° (iv) 67.3° (v) 57.3°

31. Find the missing angle in the given trapezium



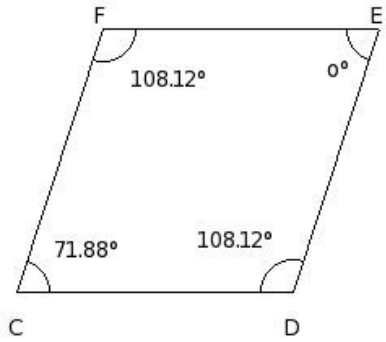
(i) 113.91° (ii) 108.91° (iii) 98.91° (iv) 128.91° (v) 103.91°

32. Find the missing angle in the given parallelogram



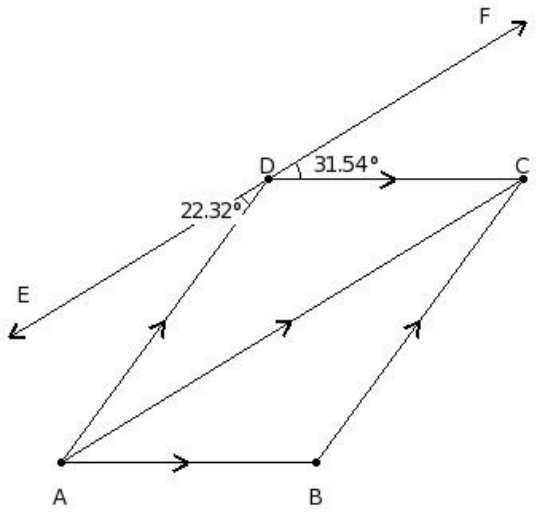
(i) 62.28° (ii) 72.28° (iii) 57.28° (iv) 67.28° (v) 87.28°

33. Find the missing angle in the given rhombus



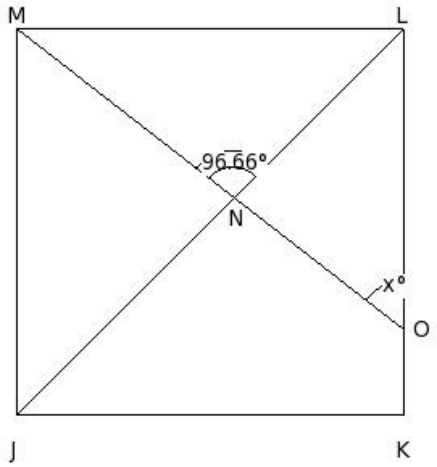
(i) 76.88° (ii) 71.88° (iii) 81.88° (iv) 101.88° (v) 86.88°

34. In the adjoining figure, $ABCD$ is a parallelogram and EF is such that $\overline{EF} \parallel \overline{AC}$
If $\angle ADE = 22.32°$ and $\angle CDF = 31.54°$, find the measure of $\angle CDA$.



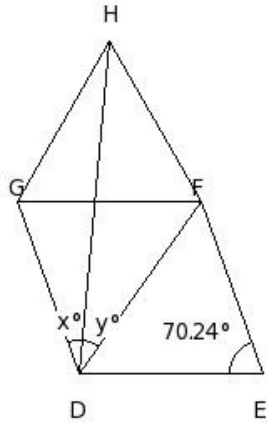
(i) 128.14° (ii) 124.14° (iii) 127.14° (iv) 126.14° (v) 125.14°

35. In the adjoining figure, JKLM is a square. A line segment MO cuts the side KL at O and the diagonal JL at N such that $\angle MNL = 96.66°$ and $\angle NOL = x°$. Find the value of x .



(i) 53.66° (ii) 50.66° (iii) 51.66° (iv) 52.66° (v) 49.66°

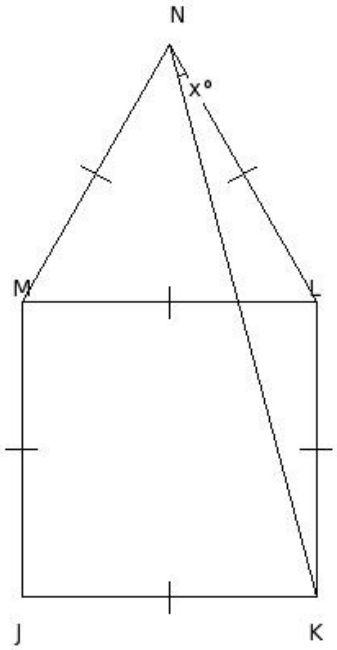
36. In the adjoining figure, DEFG is a rhombus and $\triangle HGF$ is an equilateral triangle. H and D are on opposite sides of FG. If $\angle DEF = 70.24°$, find the values of x and y .



(i) $x=26.88°, y=32°$ (ii) $x=25.88°, y=31°$ (iii) $x=24.88°, y=30°$ (iv) $x=22.88°, y=28°$

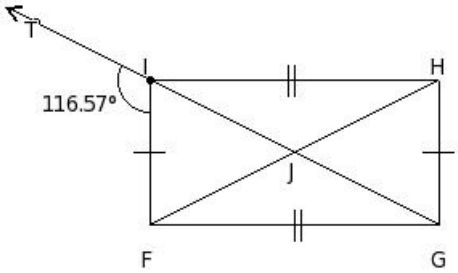
(v) $x=23.88°, y=29°$

37. In the adjoining figure, equilateral △MLN surmounts square JKLM. If LNK = x°, find the value of x.



(i) 15° (ii) 14° (iii) 16° (iv) 13° (v) 17°

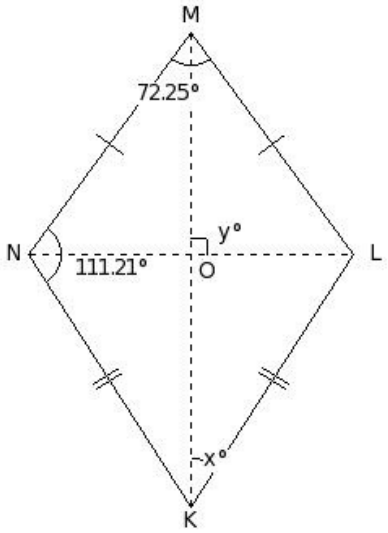
38. In the given figure, FGHI is a rectangle whose diagonals intersect at J.
Diagonal GI is produced to T and ∠FIT = 116.57°. Find the angles of △JGH.



(i) J=53.14°,G=63.43°,H=63.43° (ii) J=55.14°,G=63.43°,H=61.43° (iii) J=53.14°,G=61.43°,H=65.43°

(iv) J=51.14°,G=65.43°,H=63.43° (v) J=51.14°,G=63.43°,H=65.43°

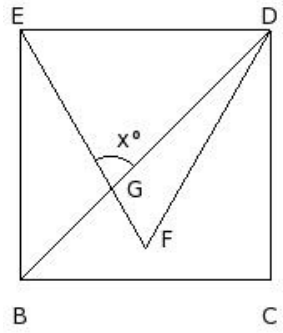
39. In the given figure, KLMN is a kite whose diagonals intersect at O.
If ∠LMN = 72.25° and ∠MNK = 111.21°, calculate ∠OKL and ∠MOL.



(i) x=30.67°,y=88° (ii) x=33.67°,y=91° (iii) x=31.67°,y=89° (iv) x=34.67°,y=92°

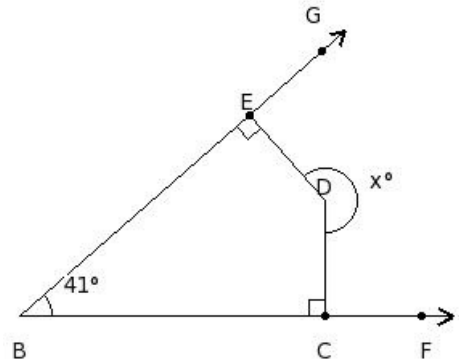
(v) x=32.67°,y=90°

40. $\triangle FDE$ is an equilateral triangle in a square $BCDE$.
If BD and EF intersect at G, then find the value of x.



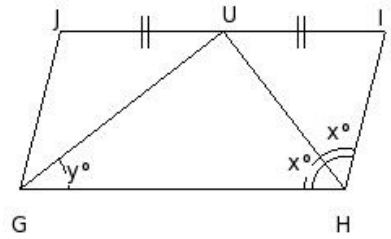
(i) 73° (ii) 74° (iii) 77° (iv) 76° (v) 75°

41. In the adjoining figure, D is a point in the interior of $\angle FBG$.
If $DC \perp BF$ and $DE \perp BG$ and $\angle FBG = 41°$, find the measure of x .



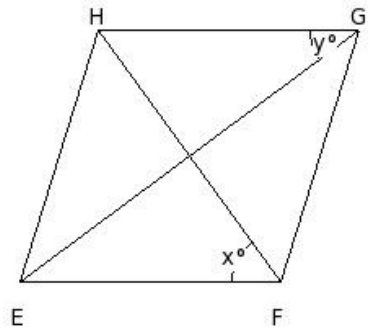
(i) 221° (ii) 223° (iii) 219° (iv) 222° (v) 220°

42. In the given figure, GHIJ is a parallelogram. U is the mid-point of IJ.
HU bisects $\angle H$. If $x = 52°$, find angle 'y'.



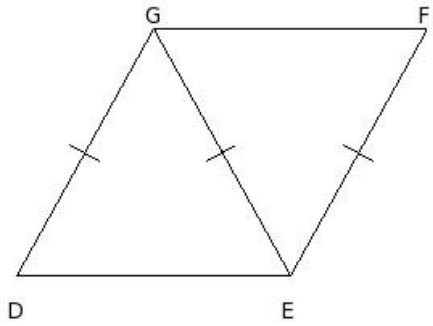
(i) 36° (ii) 37° (iii) 40° (iv) 39° (v) 38°

43. In the given figure, EFGH is a rhombus. Given x = 54°, find the value of 'y'.



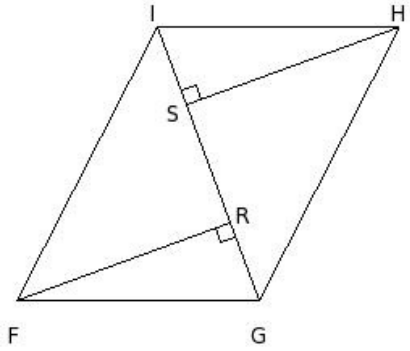
(i) 38° (ii) 36° (iii) 37° (iv) 34° (v) 35°

44. In the given figure, DEFG is a parallelogram. EG is the diagonal such that DG = EG = EF. Given ∠D = 61°, find ∠GEF



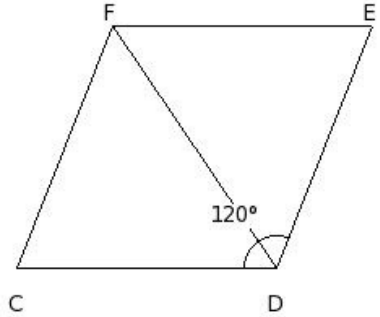
(i) 56° (ii) 59° (iii) 60° (iv) 58° (v) 57°

45. In the given figure, FGHI is a parallelogram. FR and HS are perpendicular to the diagonal GI. Given ∠RFG = 20°, find ∠HIG



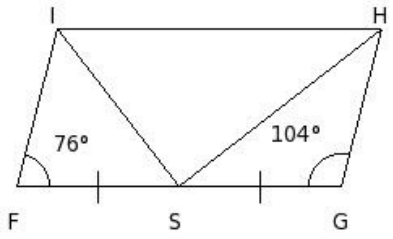
(i) 71° (ii) 72° (iii) 68° (iv) 69° (v) 70°

46. In the given figure, CDEF is a rhombus such that ∠D = 120°. Then △CDF is



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

47. In the given figure, FGHI is a parallelogram such that S is the mid-point of FG and FG = 2IF. Find ∠ISH



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

Assignment Key

1) (iv)	2) (iv)	3) (ii)	4) (iv)	5) (ii)	6) (iii)
7) (i)	8) (iv)	9) (iii)	10) (i)	11) (i)	12) (iv)
13) (iv)	14) (ii)	15) (iii)	16) (i)	17) (i)	18) (i)
19) (ii)	20) (i)	21) (iv)	22) (v)	23) (i)	24) (i)
25) (iii)	26) (v)	27) (iii)	28) (ii)	29) (ii)	30) (iii)
31) (iii)	32) (iii)	33) (ii)	34) (iv)	35) (iii)	36) (iii)
37) (i)	38) (i)	39) (v)	40) (v)	41) (i)	42) (v)
43) (ii)	44) (iv)	45) (v)	46) (ii)	47) (v)	