EduSahara™ Assignment

Name : Quadrilateral Angle Problems

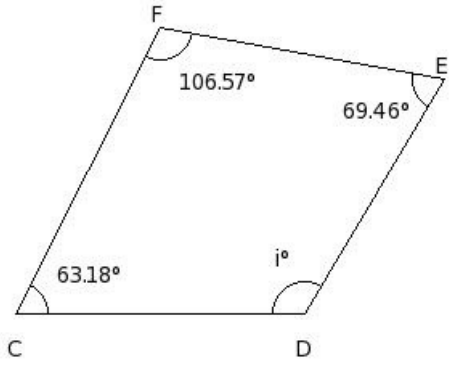
Chapter : Quadrilaterals

Grade : SSC Grade VII

1. The measures of three angles of a quadrilateral are $62.33°, 106.65°$ and $83.47°$. Find the fourth angle

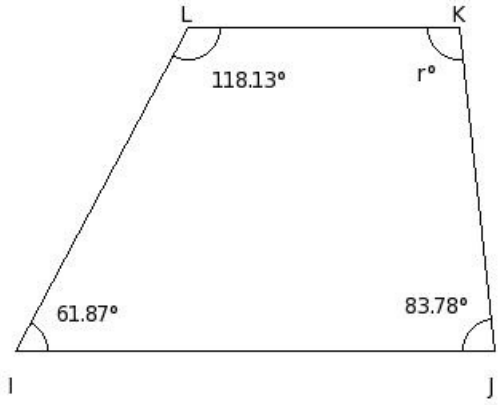
   (i) 137.55° (ii) 112.55° (iii) 107.55° (iv) 117.55° (v) 122.55°

2. Find the missing angle in the given quadrilateral



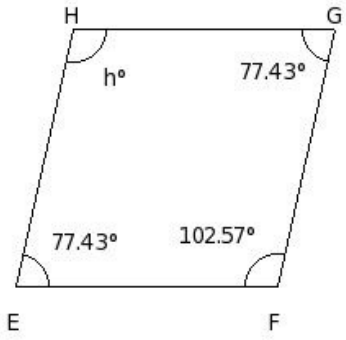
   (i) 125.79° (ii) 130.79° (iii) 135.79° (iv) 120.79° (v) 150.79°

3. Find the missing angle in the given trapezium



   (i) 111.22° (ii) 96.22° (iii) 106.22° (iv) 126.22° (v) 101.22°

4. Find the missing angle in the given rhombus



   (i) 107.57° (ii) 117.57° (iii) 112.57° (iv) 132.57° (v) 102.57°

5. In parallelogram ABCD, if $\angle B = 112.03°$, then find the value of $\angle A$

   (i) 69.97° (ii) 68.97° (iii) 66.97° (iv) 65.97° (v) 67.97°

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

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

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

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

8. If ABCD is an isosceles trapezium, $\angle B =$

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

9. FGHI is a rhombus in which $\angle F = 120°$.
$\overline{GI}$
is the diagonal. Then $\triangle FGH$ is

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

(v) an obtuse angled triangle

10. HIJK is a rhombus in which $\angle H = 80°$.
$\overline{IK}$
is the diagonal. Then $\triangle HIJ$ is

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

(v) a scalene triangle

11. The angles of a quadrilateral OPQR are in the ratio 9 : 31 : 11 : 69. Find the measure of each angle of the quadrilateral.

(i) O=27°,P=93°,Q=33°,R=207° (ii) O=29°,P=92°,Q=31°,R=208° (iii) O=28°,P=92°,Q=35°,R=205°

(iv) O=25°,P=95°,Q=32°,R=208° (v) O=26°,P=91°,Q=34°,R=209°

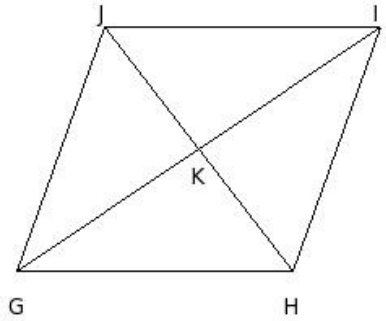
12. Two adjacent angles of a parallelogram MNOP are in the ratio 14 : 22. Find the measure of each of its angles.

(i) M=71°,N=109°,O=72°,P=108° (ii) M=68°,N=112°,O=69°,P=111°

(iii) M=72°,N=109°,O=68°,P=111° (iv) M=69°,N=108°,O=71°,P=112°

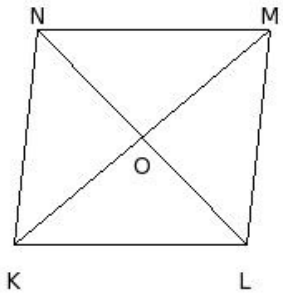
(v) M=70°,N=110°,O=70°,P=110°

13. In the adjoining figure, GHIJ is a parallelogram in which $\angle JGI = 36.4°, \angle IGH = 33.81°, \angle JKI = 93.91°$. Calculate $\angle GHJ$



(i) 50.28° (ii) 53.28° (iii) 51.28° (iv) 54.28° (v) 52.28°

14. In the adjoining figure, KLMN is a parallelogram in which $\angle NKM = 44.07°, \angle MKL = 39.73°, \angle NOM = 93.94°$. Calculate $\angle MNL$



(i) 46.33° (ii) 45.33° (iii) 48.33° (iv) 47.33° (v) 44.33°

15. Three angles of quadrilateral measure 118.76°, 52.78° and 69.7° respectively. Find the measure of the fourth angle

(i) 119.76° (ii) 120.76° (iii) 116.76° (iv) 117.76° (v) 118.76°

16. Three angles of a quadrilateral are equal and the fourth angle measure 65.81°. What is the measure of each of the equal angles?

(i) 96.06° (ii) 97.06° (iii) 99.06° (iv) 98.06° (v) 100.06°

17. Two angles of a quadrilateral are of measure 69.75° and 95.27° respectively and the other two angles are equal. Find the measure of each of the equal angles.

(i) 96.49° (ii) 97.49° (iii) 99.49° (iv) 98.49° (v) 95.49°

18. A quadrilateral has three acute angles, each measuring 73°. What is the measure of its fourth angle?

(i) 142.00° (ii) 139.00° (iii) 140.00° (iv) 141.00° (v) 143.00°

19. One angle of a parallelogram measures $G = 81.28°$.
Find the measure of each of its remaining angles.

(i) $H=99.72°, I=82.28°, J=99.72°$ (ii) $H=98.72°, I=81.28°, J=98.72°$ (iii) $H=100.72°, I=83.28°, J=100.72°$

(iv) $H=96.72°, I=79.28°, J=96.72°$ (v) $H=97.72°, I=80.28°, J=97.72°$

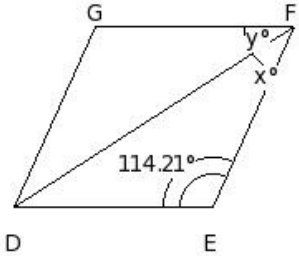
20. Two adjacent angles of a parallelogram are in the ratio $8 : 22$.
Find the measure of each of its angles.

(i) $A=49°, B=131°, C=50°, D=130°$ (ii) $A=46°, B=134°, C=47°, D=133°$

(iii) $A=50°, B=131°, C=46°, D=133°$ (iv) $A=47°, B=130°, C=49°, D=134°$

(v) $A=48°, B=132°, C=48°, D=132°$

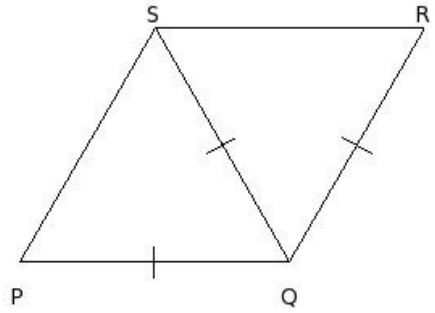
21. In the figure given below, DEFG is a rhombus. Find the values of x and y



(i) $x=30.9°, y=30.9°$ (ii) $x=34.9°, y=34.9°$ (iii) $x=32.9°, y=32.9°$ (iv) $x=33.9°, y=33.9°$

(v) $x=31.9°, y=31.9°$

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

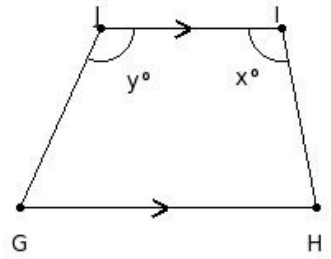


(i) $P=59°, Q=118°, R=61°, S=122°$ (ii) $P=58°, Q=122°, R=59°, S=121°$

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

(v) $P=61°, Q=119°, R=62°, S=118°$

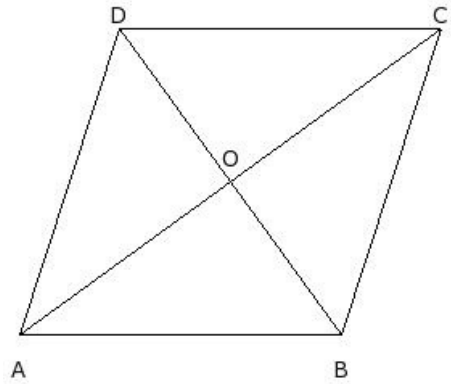
23. In the adjoining figure, GHIJ is a trapezium in which $\overline{GH} \parallel \overline{IJ}$.
If $x = 100.9°$ and $y = 114.21°$, find the measures of $\angle G$ and $\angle H$.



(i) $G=65.79°, H=79.09°$ (ii) $G=67.79°, H=81.09°$ (iii) $G=64.79°, H=78.09°$ (iv) $G=66.79°, H=80.09°$

(v) $G=63.79°, H=77.09°$

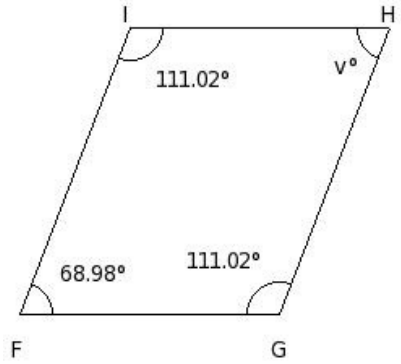
24. In the adjoining figure, ABCD is a rhombus whose diagonals intersect at O.
If $\angle OAB : \angle ABO = 2 : 3$, find the angles of $\triangle OAB$.



(i) $O=88°, A=36°, B=56°$ (ii) $O=88°, A=38°, B=54°$ (iii) $O=90°, A=36°, B=54°$ (iv) $O=90°, A=34°, B=56°$

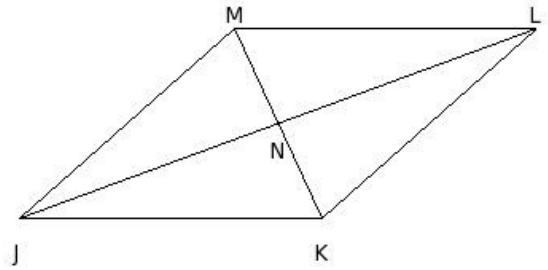
(v) $O=92°, A=36°, B=52°$

25. Find the missing angle in the given parallelogram



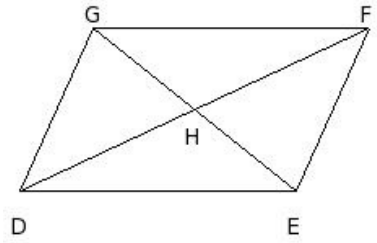
(i) 73.98° (ii) 78.98° (iii) 83.98° (iv) 68.98° (v) 98.98°

26. In the adjoining figure, JKLM is a parallelogram in which ∠MJL = 21.38°, ∠LJK = 20.01°, ∠MNL = 94.02°. Calculate ∠KLJ



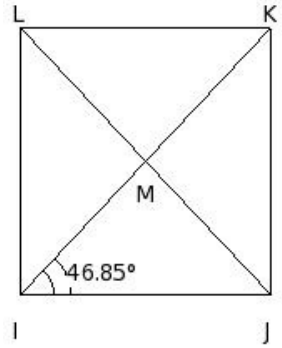
(i) 19.38° (ii) 20.38° (iii) 22.38° (iv) 21.38° (v) 23.38°

27. In the adjoining figure, DEFG is a parallelogram in which ∠GDF = 40.73°, ∠FDE = 25.05°, ∠GHF = 116.27°. Calculate ∠GEF



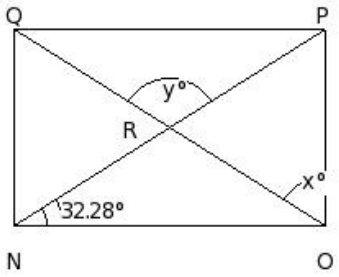
(i) 76.55° (ii) 73.55° (iii) 75.55° (iv) 74.55° (v) 77.55°

28. In the adjoining figure, IJKL is a rectangle. If ∠KIJ = 46.85°, find ∠KMJ



(i) 95.70° (ii) 92.70° (iii) 94.70° (iv) 91.70° (v) 93.70°

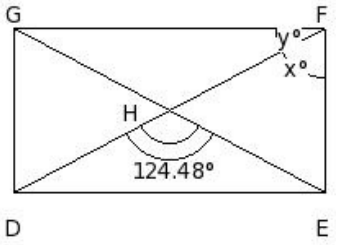
29. In the figure given below, NOPQ is a rectangle. Find the values of x and y



(i) x=59.72°,y=117.44° (ii) x=56.72°,y=114.44° (iii) x=55.72°,y=113.44° (iv) x=58.72°,y=116.44°

(v) x=57.72°,y=115.44°

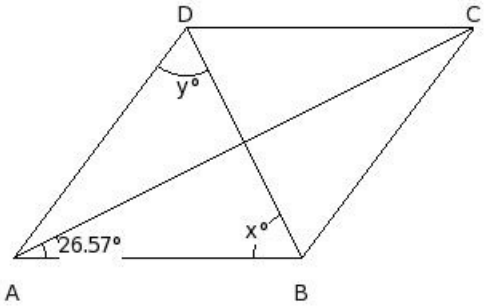
30. In the figure given below, DEFG is a rectangle. Find the values of x and y



(i) x=62.24°,y=27.76° (ii) x=64.24°,y=29.76° (iii) x=60.24°,y=25.76° (iv) x=63.24°,y=28.76°

(v) x=61.24°,y=26.76°

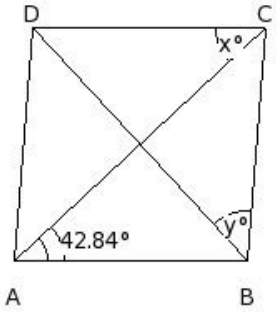
31. In the figure given below, ABCD is a rhombus. Find the values of x and y



(i) x=65.43°,y=65.43° (ii) x=64.43°,y=64.43° (iii) x=62.43°,y=62.43° (iv) x=63.43°,y=63.43°

(v) x=61.43°,y=61.43°

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

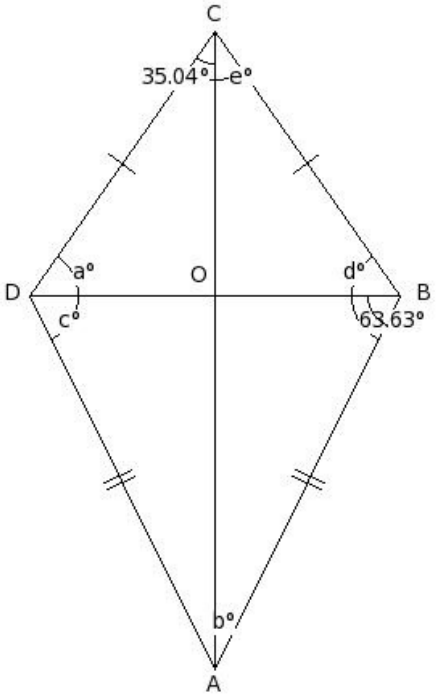


(i) x=40.84°,y=45.16° (ii) x=44.84°,y=49.16° (iii) x=42.84°,y=47.16° (iv) x=41.84°,y=46.16°

(v) x=43.84°,y=48.16°

33. 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 = 35.04° and ∠ABO = 63.63°, find the measure of each of the angles marked a,b,c,d and e.



(i) a = 54.96° , b = 27.37° , c = 63.63° , d = 54.96° , e = 35.04°

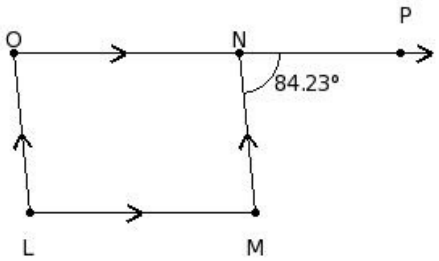
(ii) a = 54.96° , b = 27.37° , c = 62.63° , d = 56.96° , e = 35.04°

(iii) a = 54.96° , b = 27.37° , c = 62.63° , d = 54.96° , e = 35.04°

(iv) a = 54.96° , b = 26.37° , c = 63.63° , d = 54.96° , e = 35.04°

(v) a = 54.96° , b = 27.37° , c = 62.63° , d = 56.96° , e = 33.04°

34. In the adjoining figure, side NO of parallelogram LMNO has been produced to P. If ∠MNP = 84.23° , find the measure of each angle of the parallelogram.

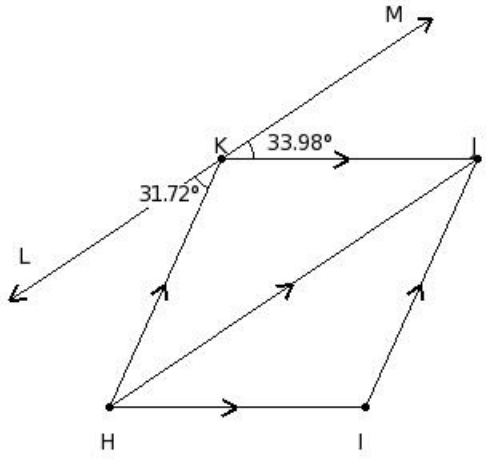


(i) L=93.77°,M=86.23°,N=94.77°,O=85.23° (ii) L=94.77°,M=82.23°,N=96.77°,O=86.23°

(iii) L=97.77°,M=83.23°,N=93.77°,O=85.23° (iv) L=96.77°,M=83.23°,N=97.77°,O=82.23°

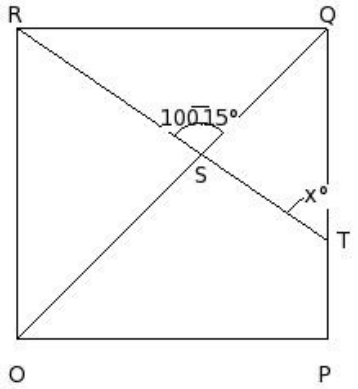
(v) L=95.77°,M=84.23°,N=95.77°,O=84.23°

35. In the adjoining figure, HIJK is a parallelogram and LM is such that $\overline{LM} \parallel \overline{HJ}$
If $\angle HKL = 31.72°$ and $\angle JKM = 33.98°$, find the measure of $\angle HIJ$.



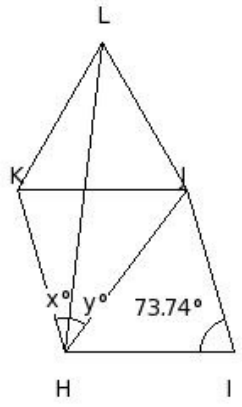
(i) 114.30° (ii) 112.30° (iii) 116.30° (iv) 113.30° (v) 115.30°

36. In the adjoining figure, OPQR is a square. A line segment RT cuts the side PQ at T and the diagonal OQ at S such that $\angle RSQ = 100.15°$ and $\angle STQ = x°$. Find the value of x .



(i) 56.15° (ii) 54.15° (iii) 53.15° (iv) 57.15° (v) 55.15°

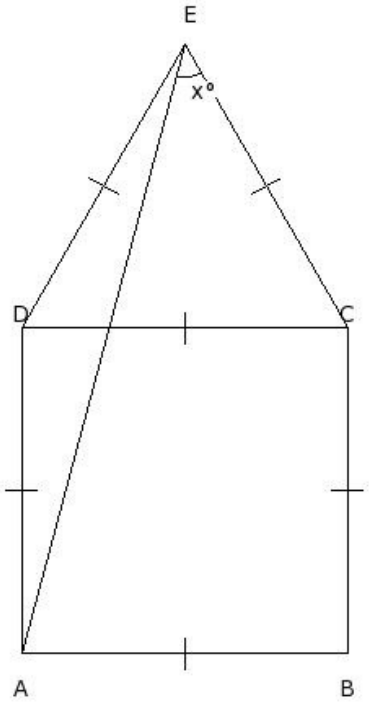
37. In the adjoining figure, HIJK is a rhombus and $\triangle LKJ$ is an equilateral triangle. L and H are on opposite sides of JK. If $\angle HIJ = 73.74°$, find the values of x and y .



(i) x=22.13°,y=29° (ii) x=23.13°,y=30° (iii) x=24.13°,y=31° (iv) x=25.13°,y=32°

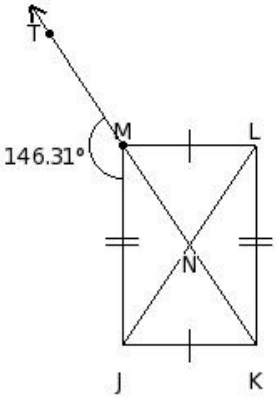
(v) x=21.13°,y=28°

38. In the adjoining figure, equilateral △DCE surmounts square ABCD. If CEA = x°, find the value of x.



(i) 44° (ii) 43° (iii) 45° (iv) 46° (v) 47°

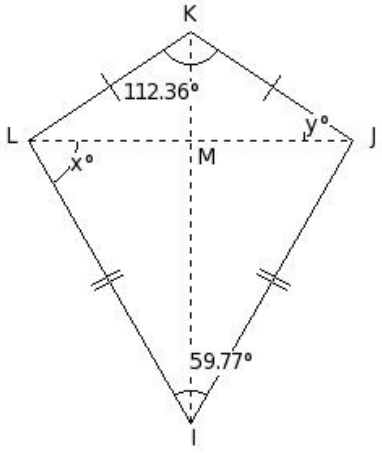
39. In the given figure, JKLM is a rectangle whose diagonals intersect at N.
Diagonal KM is produced to T and ∠JMT = 146.31°. Find the angles of △NJK.



(i) N=69.38°,J=56.31°,K=54.31° (ii) N=67.38°,J=56.31°,K=56.31° (iii) N=67.38°,J=54.31°,K=58.31°

(iv) N=65.38°,J=56.31°,K=58.31° (v) N=65.38°,J=58.31°,K=56.31°

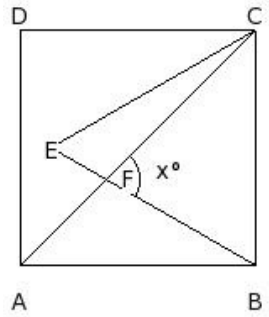
40. In the given figure, IJKL is a kite whose diagonals intersect at M.
If ∠LIJ = 59.77° and ∠JKL = 112.36°, calculate ∠MLI and ∠MJK.



(i) x=58.11°,y=31.82° (ii) x=59.11°,y=32.82° (iii) x=62.11°,y=35.82° (iv) x=61.11°,y=34.82°

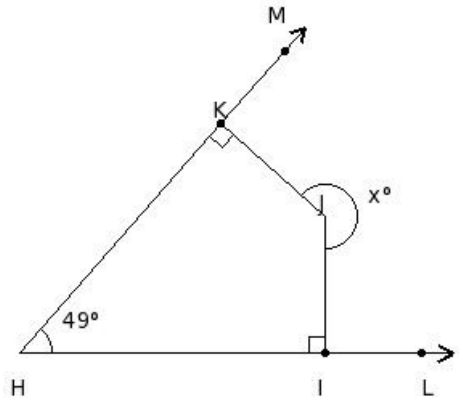
(v) x=60.11°,y=33.82°

41. $\triangle EBC$ is an equilateral triangle in a square $ABCD$.
If AC and EB intersect at F, then find the value of x.



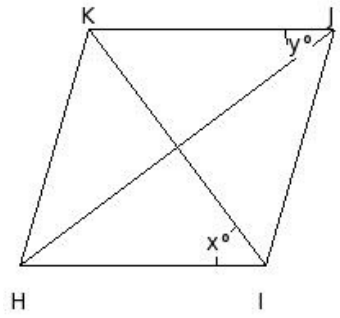
(i) 75° (ii) 73° (iii) 77° (iv) 74° (v) 76°

42. In the adjoining figure, J is a point in the interior of $\angle LHM$.
If $JI \perp HL$ and $JK \perp HM$ and $\angle LHM = 49°$, find the measure of x .



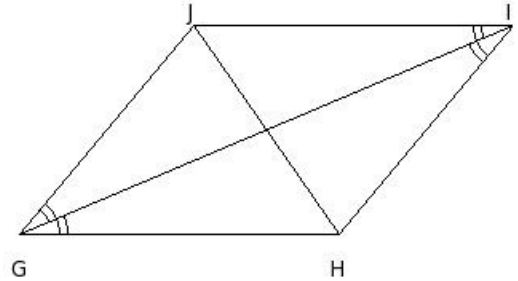
(i) 227° (ii) 228° (iii) 230° (iv) 231° (v) 229°

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



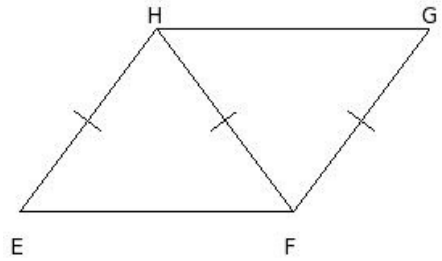
(i) 39° (ii) 37° (iii) 38° (iv) 36° (v) 35°

44. In the given figure, GHIJ is a parallelogram. GI bisects $\angle G$ & $\angle I$.
Given GI = 12 cm and HJ = 8 cm, find GH



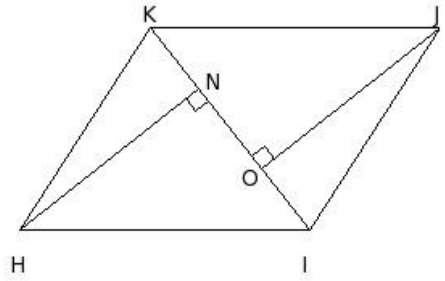
(i) 9.21 cm (ii) 8.21 cm (iii) 7.21 cm (iv) 5.21 cm (v) 6.21 cm

45. In the given figure, EFGH is a parallelogram. FH is the diagonal such that $EH = FH = FG$. Given $\angle E = 53°$, find $\angle HFG$



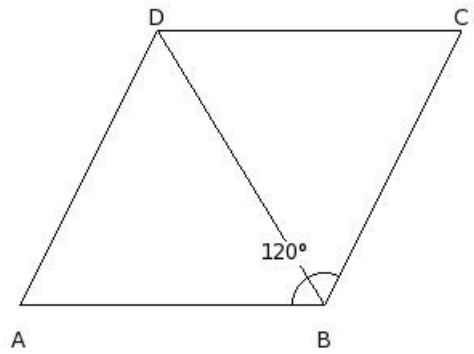
(i) 76° (ii) 72° (iii) 73° (iv) 74° (v) 75°

46. In the given figure, HIJK is a parallelogram. HN and JO are perpendicular to the diagonal IK. Given $\angle OJK = 38°$, find $\angle KIH$



(i) 54° (ii) 51° (iii) 50° (iv) 53° (v) 52°

47. In the given figure, ABCD is a rhombus such that $\angle B = 120°$. Then $\triangle ABD$ is



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

Assignment Key

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