EduSahara™ Assignment

Name : Quadrilateral Angle Properties

Chapter : Quadrilaterals

Grade : ICSE Grade VII

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1. In parallelogram ABCD, if ∠A = 103.14°, then find the value of ∠C

   (i) 101.14° (ii) 102.14° (iii) 105.14° (iv) 104.14° (v) 103.14°

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

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

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

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

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

   (i) ∠B (ii) ∠A (iii) 90° (iv) ∠C

5. ABCD is a rhombus in which ∠A = 120° .
   $\overline{BD}$
   is the diagonal. Then △ABC is

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

   (v) an equilateral triangle

6. JKLM is a rhombus in which ∠J = 86° .
   $\overline{KM}$
   is the diagonal. Then △JKL is

   (i) an equilateral triangle (ii) a scalene triangle (iii) an obtuse angled triangle (iv) an isosceles triangle

   (v) None of these

7. The angles of a quadrilateral FGHI are in the ratio 30 : 40 : 6 : 104. Find the measure of each angle of the quadrilateral.

   (i) F=60°,G=80°,H=12°,I=208° (ii) F=58°,G=82°,H=11°,I=209° (iii) F=62°,G=79°,H=10°,I=209°

   (iv) F=59°,G=78°,H=13°,I=210° (v) F=61°,G=79°,H=14°,I=206°

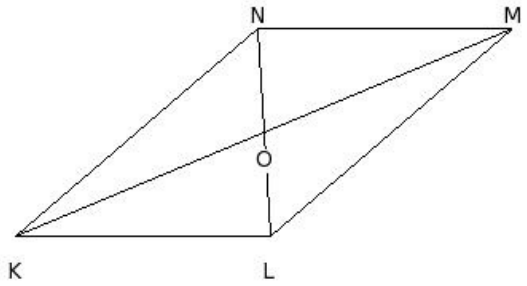
8. Two adjacent angles of a parallelogram NOPQ are in the ratio 5 : 31. Find the measure of each of its angles.

   (i) N=23°,O=157°,P=24°,Q=156° (ii) N=25°,O=155°,P=25°,Q=155°

   (iii) N=26°,O=154°,P=27°,Q=153° (iv) N=24°,O=153°,P=26°,Q=157°

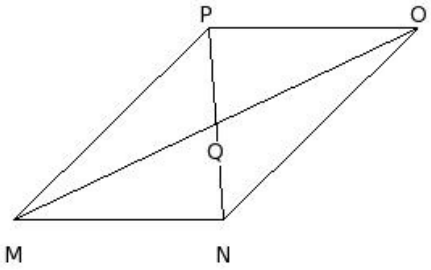
   (v) N=27°,O=154°,P=23°,Q=156°

9. In the adjoining figure, KLMN is a parallelogram in which ∠NKM = 17.92°, ∠MKL = 22.62°, ∠NOM = 70.9°. Calculate ∠KLN



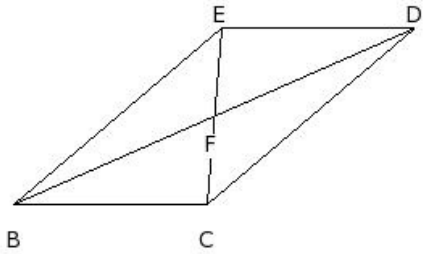
(i) 85.48° (ii) 87.48° (iii) 84.48° (iv) 88.48° (v) 86.48°

10. In the adjoining figure, MNOP is a parallelogram in which ∠PMO = 19.26°, ∠OMN = 25.27°, ∠PQO = 68.35°. Calculate ∠OPN



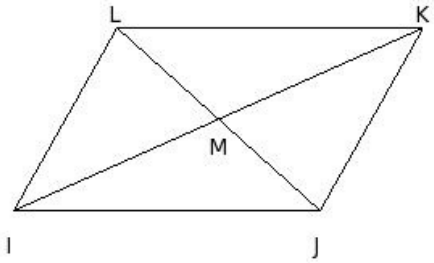
(i) 86.38° (ii) 85.38° (iii) 88.38° (iv) 84.38° (v) 87.38°

11. In the adjoining figure, BCDE is a parallelogram in which ∠EBD = 16.66°, ∠DBC = 23.53°, ∠EFD = 61.06°. Calculate ∠CDB



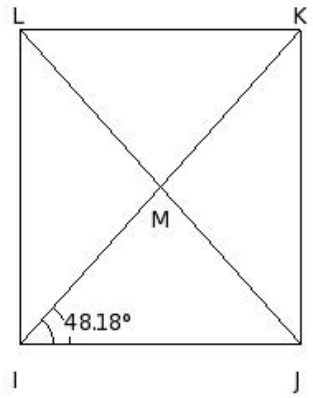
(i) 14.66° (ii) 15.66° (iii) 18.66° (iv) 17.66° (v) 16.66°

12. In the adjoining figure, IJKL is a parallelogram in which ∠LIK = 36.68°, ∠KIJ = 23.79°, ∠LMK = 113.69°. Calculate ∠LJK



(i) 76.01° (ii) 77.01° (iii) 75.01° (iv) 79.01° (v) 78.01°

13. In the adjoining figure, IJKL is a rectangle. If ∠KIJ = 48.18°, find ∠IJL



(i) 46.18° (ii) 47.18° (iii) 49.18° (iv) 48.18° (v) 50.18°

14. Three angles of quadrilateral measure 94.1°, 63.06° and 115.92° respectively. Find the measure of the fourth angle

(i) 84.92° (ii) 88.92° (iii) 85.92° (iv) 87.92° (v) 86.92°

15. Three angles of a quadrilateral are equal and the fourth angle measure 50.06°. What is the measure of each of the equal angles?

(i) 105.31° (ii) 101.31° (iii) 104.31° (iv) 103.31° (v) 102.31°

16. Two angles of a quadrilateral are of measure 104.15° and 77.14° respectively and the other two angles are equal. Find the measure of each of the equal angles.

(i) 91.35° (ii) 89.35° (iii) 88.35° (iv) 87.35° (v) 90.35°

17. A quadrilateral has three acute angles, each measuring 44°. What is the measure of its fourth angle?

(i) 230.00° (ii) 229.00° (iii) 227.00° (iv) 228.00° (v) 226.00°

18. One angle of a parallelogram measures $P = 52.02°$.
Find the measure of each of its remaining angles.

(i) $Q=128.98°, R=53.02°, S=128.98°$ (ii) $Q=129.98°, R=54.02°, S=129.98°$

(iii) $Q=127.98°, R=52.02°, S=127.98°$ (iv) $Q=125.98°, R=50.02°, S=125.98°$

(v) $Q=126.98°, R=51.02°, S=126.98°$

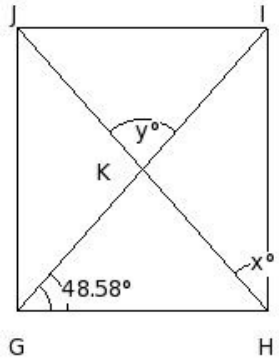
19. Two adjacent angles of a parallelogram are in the ratio $4 : 6$.
Find the measure of each of its angles.

(i) $A=74°, B=107°, C=70°, D=109°$ (ii) $A=70°, B=110°, C=71°, D=109°$

(iii) $A=72°, B=108°, C=72°, D=108°$ (iv) $A=71°, B=106°, C=73°, D=110°$

(v) $A=73°, B=107°, C=74°, D=106°$

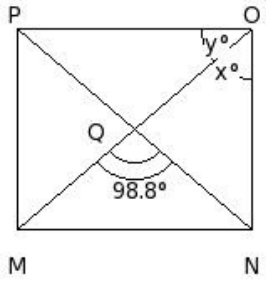
20. In the figure given below, GHIJ is a rectangle. Find the values of x and y



(i) x=39.42°,y=80.84° (ii) x=42.42°,y=83.84° (iii) x=40.42°,y=81.84° (iv) x=41.42°,y=82.84°

(v) x=43.42°,y=84.84°

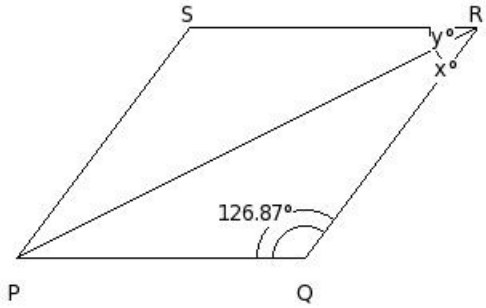
21. In the figure given below, MNOP is a rectangle. Find the values of x and y



(i) x=51.4°,y=42.6° (ii) x=50.4°,y=41.6° (iii) x=47.4°,y=38.6° (iv) x=49.4°,y=40.6°

(v) x=48.4°,y=39.6°

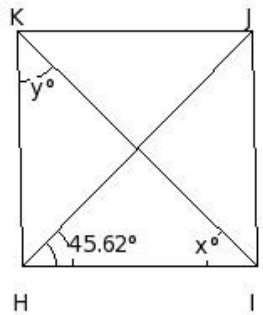
22. In the figure given below, PQRS is a rhombus. Find the values of x and y



(i) x=25.56°,y=25.56° (ii) x=24.56°,y=24.56° (iii) x=26.56°,y=26.56° (iv) x=28.56°,y=28.56°

(v) x=27.56°,y=27.56°

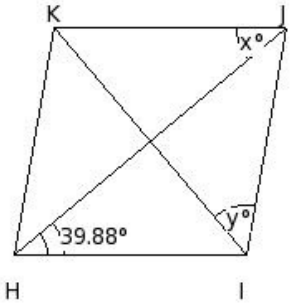
23. In the figure given below, HIJK is a rhombus. Find the values of x and y



(i) x=43.38°,y=43.38° (ii) x=42.38°,y=42.38° (iii) x=44.38°,y=44.38° (iv) x=45.38°,y=45.38°

(v) x=46.38°,y=46.38°

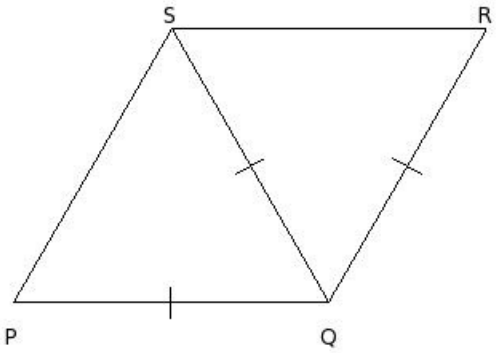
24. In the figure given below, HIJK is a rhombus. Find the values of x and y



(i) $x=37.88°, y=48.12°$ (ii) $x=41.88°, y=52.12°$ (iii) $x=38.88°, y=49.12°$ (iv) $x=40.88°, y=51.12°$

(v) $x=39.88°, y=50.12°$

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

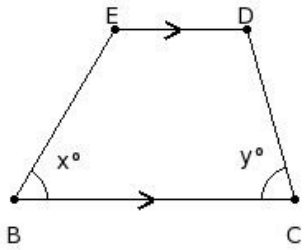


(i) $P=59°, Q=118°, R=61°, S=122°$ (ii) $P=62°, Q=119°, R=58°, S=121°$

(iii) $P=61°, Q=119°, R=62°, S=118°$ (iv) $P=58°, Q=122°, R=59°, S=121°$

(v) $P=60°, Q=120°, R=60°, S=120°$

26. In the adjoining figure, BCDE is a trapezium in which $\overline{BC} \parallel \overline{DE}$.
If $x = 59.36°$ and $y = 74.28°$, find the measures of $\angle D$ and $\angle E$.

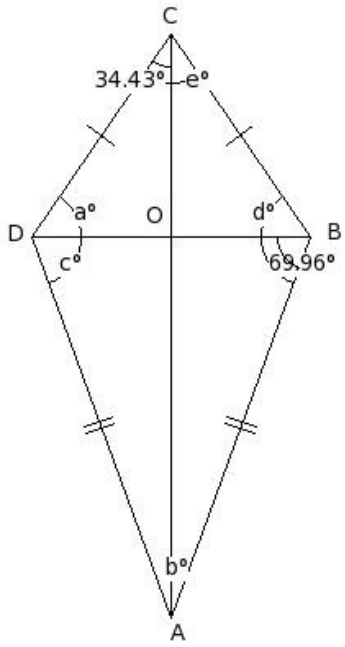


(i) $D=105.72°, E=120.64°$ (ii) $D=103.72°, E=118.64°$ (iii) $D=104.72°, E=119.64°$

(iv) $D=107.72°, E=122.64°$ (v) $D=106.72°, E=121.64°$

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 $\angle OCD = 34.43°$ and $\angle ABO = 69.96°$, find the measure of each of the angles marked a,b,c,d and e.



(i) a = 55.57° , b = 20.04° , c = 69.96° , d = 55.57° , e = 34.43°

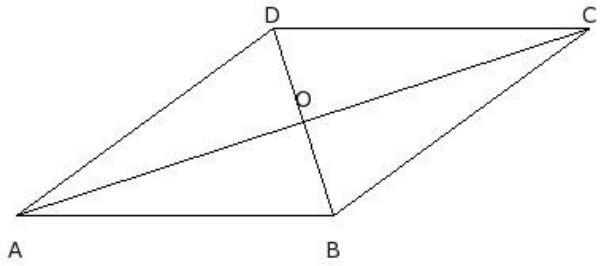
(ii) a = 55.57° , b = 21.04° , c = 68.96° , d = 55.57° , e = 34.43°

(iii) a = 55.57° , b = 21.04° , c = 69.96° , d = 55.57° , e = 34.43°

(iv) a = 55.57° , b = 21.04° , c = 68.96° , d = 57.57° , e = 34.43°

(v) a = 55.57° , b = 21.04° , c = 68.96° , d = 57.57° , e = 32.43°

28. In the adjoining figure, $ABCD$ is a rhombus whose diagonals intersect at O.
If $\angle OAB : \angle ABO = 2 : 8$, find the angles of $\triangle OAB$.



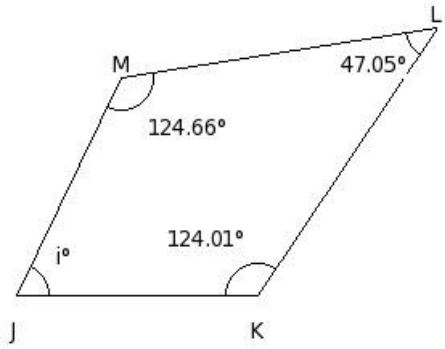
(i) $O=88°, A=20°, B=72°$ (ii) $O=92°, A=18°, B=70°$ (iii) $O=90°, A=16°, B=74°$ (iv) $O=90°, A=18°, B=72°$

(v) $O=88°, A=18°, B=74°$

29. The measures of three angles of a quadrilateral are $49.25°, 122.49°$ and $44.42°$. Find the fourth angle

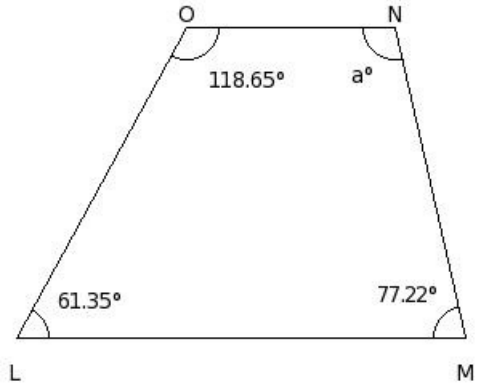
(i) 143.84° (ii) 158.84° (iii) 173.84° (iv) 153.84° (v) 148.84°

30. Find the missing angle in the given quadrilateral



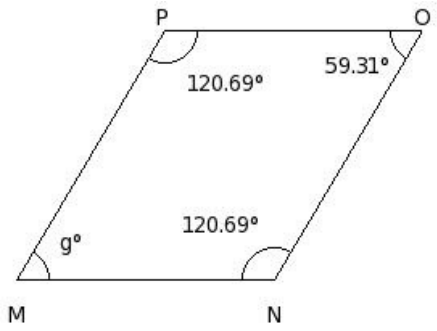
(i) 64.29° (ii) 74.29° (iii) 94.29° (iv) 79.29° (v) 69.29°

31. Find the missing angle in the given trapezium



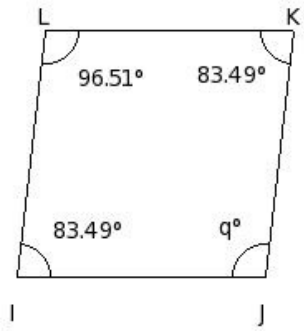
(i) 102.78° (ii) 117.78° (iii) 112.78° (iv) 107.78° (v) 132.78°

32. Find the missing angle in the given parallelogram



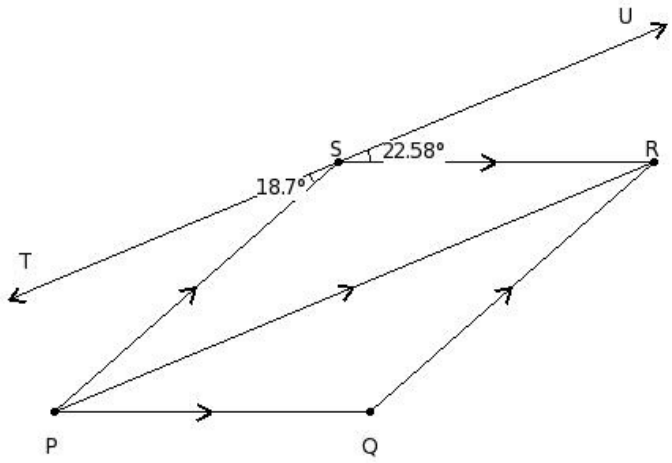
(i) 89.31° (ii) 74.31° (iii) 69.31° (iv) 64.31° (v) 59.31°

33. Find the missing angle in the given rhombus



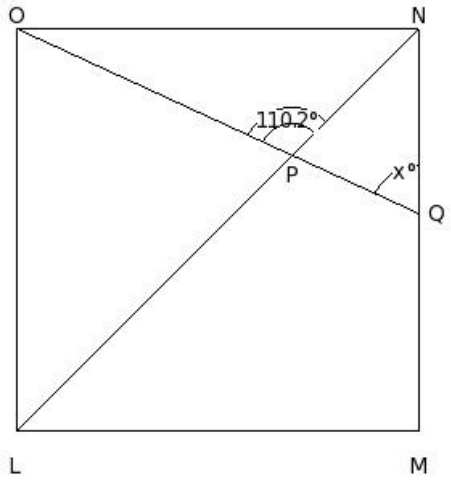
(i) 101.51° (ii) 106.51° (iii) 96.51° (iv) 111.51° (v) 126.51°

34. In the adjoining figure, PQRS is a parallelogram and TU is such that $\overline{TU} \parallel \overline{PR}$
If $\angle PST = 18.7°$ and $\angle RSU = 22.58°$, find the measure of $\angle RSP$.



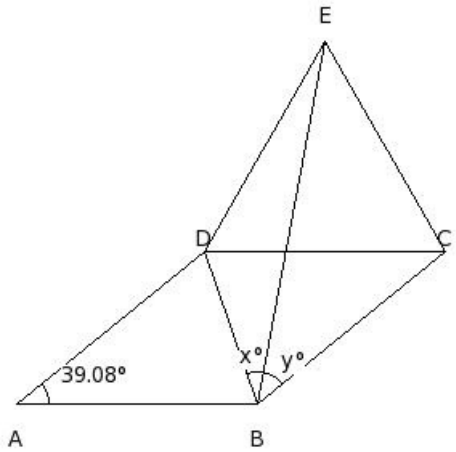
(i) 139.72° (ii) 138.72° (iii) 137.72° (iv) 136.72° (v) 140.72°

35. In the adjoining figure, LMNO is a square. A line segment OQ cuts the side MN at Q and the diagonal LN at P such that $\angle OPN = 110.2°$ and $\angle PQN = x°$. Find the value of x .



(i) 63.20° (ii) 67.20° (iii) 65.20° (iv) 64.20° (v) 66.20°

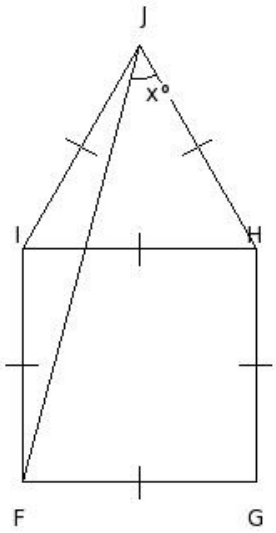
36. In the adjoining figure, ABCD is a rhombus and $\triangle EDC$ is an equilateral triangle. E and B are on opposite sides of CD. If $\angle DAB = 39.08°$, find the values of x and y .



(i) $x=30°, y=40.46°$ (ii) $x=28°, y=38.46°$ (iii) $x=31°, y=41.46°$ (iv) $x=32°, y=42.46°$

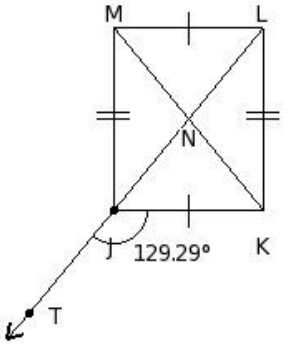
(v) $x=29°, y=39.46°$

37. In the adjoining figure, equilateral $\triangle IHJ$ surmounts square FGHI. If HJF = x°, find the value of x.



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

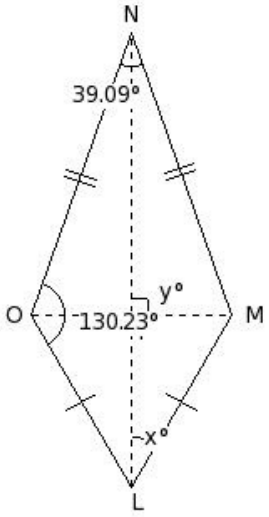
38. In the given figure, JKLM is a rectangle whose diagonals intersect at N.
Diagonal JL is produced to T and $\angle KJT = 129.29°$. Find the angles of $\triangle NLM$.



(i) N=76.58°,L=50.71°,M=52.71° (ii) N=78.58°,L=50.71°,M=50.71° (iii) N=80.58°,L=50.71°,M=48.71°

(iv) N=78.58°,L=48.71°,M=52.71° (v) N=76.58°,L=52.71°,M=50.71°

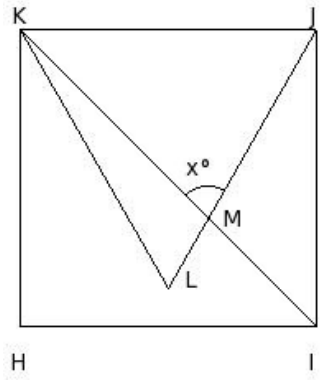
39. In the given figure, LMNO is a kite whose diagonals intersect at P.
If $\angle MNO = 39.09°$ and $\angle NOL = 130.23°$, calculate $\angle PLM$ and $\angle NPM$.



(i) x=32.23°,y=92° (ii) x=29.23°,y=89° (iii) x=30.23°,y=90° (iv) x=31.23°,y=91°

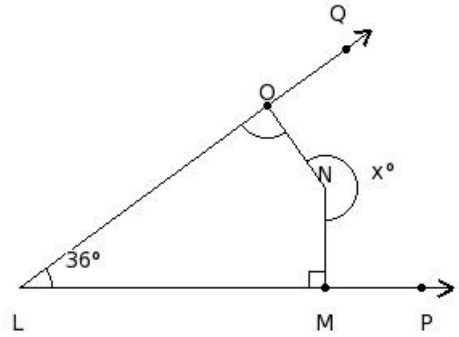
(v) x=28.23°,y=88°

40. △LJK is an equilateral triangle in a square HIJK.
If IK and LJ intersect at M, then find the value of x.



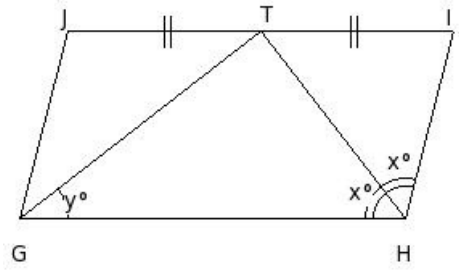
(i) 74° (ii) 77° (iii) 73° (iv) 75° (v) 76°

41. In the adjoining figure, N is a point in the interior of ∠PLQ.
If NM ⊥ LP and NO ⊥ LQ and ∠PLQ = 36°, find the measure of x .



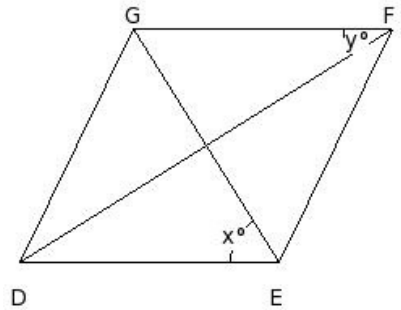
(i) 217° (ii) 214° (iii) 216° (iv) 215° (v) 218°

42. In the given figure, GHIJ is a parallelogram. T is the mid-point of IJ.
HT bisects ∠H. If x = 52°, find angle 'y'.



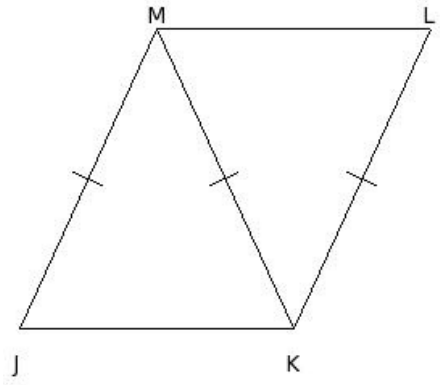
(i) 37° (ii) 36° (iii) 38° (iv) 39° (v) 40°

43. In the given figure, DEFG is a rhombus. Given x = 58°, find the value of 'y'.



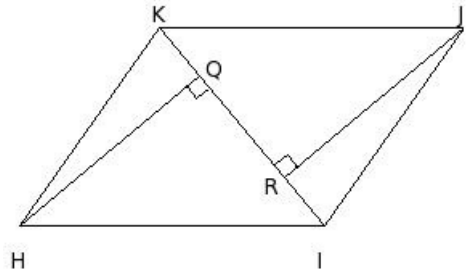
(i) 31° (ii) 30° (iii) 34° (iv) 33° (v) 32°

44. In the given figure, JKLM is a parallelogram. KM is the diagonal such that JM = KM = KL. Given ∠J = 65°, find ∠MKL



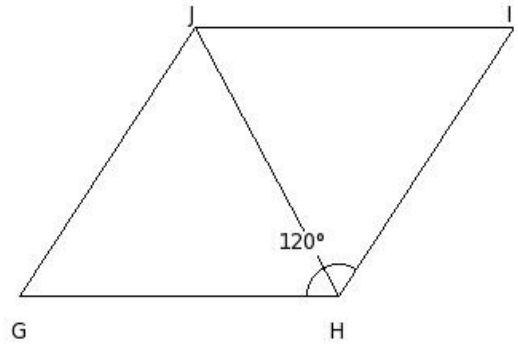
(i) 50° (ii) 52° (iii) 48° (iv) 49° (v) 51°

45. In the given figure, HIJK is a parallelogram. HQ and JR are perpendicular to the diagonal IK. Given ∠RJK = 40°, find ∠KIH



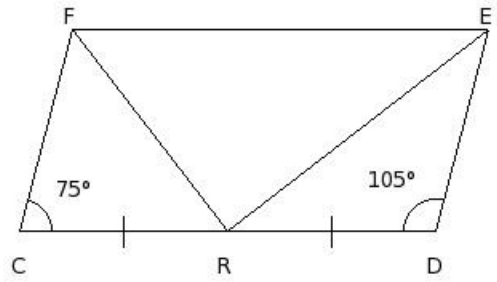
(i) 52° (ii) 48° (iii) 50° (iv) 49° (v) 51°

46. In the given figure, GHIJ is a rhombus such that ∠H = 120°. Then △GHJ is



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

47. In the given figure, CDEF is a parallelogram such that R is the mid-point of CD and CD = 2FC. Find ∠FRE



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

Assignment Key

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

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