EduSahara™ Assignment

Name : Quadrilateral Angle Properties

Chapter : Quadrilaterals

Grade : CBSE Grade IX

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1. The angles of a quadrilateral JKLM are in the ratio 4 : 3 : 5 : 8. Find the measure of each angle of the quadrilateral.

   (i) J=72°,K=54°,L=90°,M=144° (ii) J=74°,K=53°,L=88°,M=145° (iii) J=71°,K=52°,L=91°,M=146°

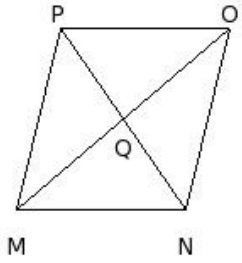
   (iv) J=70°,K=56°,L=89°,M=145° (v) J=73°,K=53°,L=92°,M=142°

2. Two adjacent angles of a parallelogram JKLM are in the ratio 5 : 7. Find the measure of each of its angles.

   (i) J=76°,K=104°,L=77°,M=103° (ii) J=74°,K=103°,L=76°,M=107° (iii) J=73°,K=107°,L=74°,M=106°

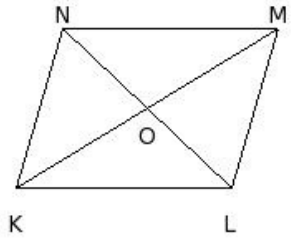
   (iv) J=77°,K=104°,L=73°,M=106° (v) J=75°,K=105°,L=75°,M=105°

3. In the adjoining figure, MNOP is a parallelogram in which
   $\angle PMO = 36.27°, \angle OMN = 40.07°, \angle PQO = 83.82°$. Calculate $\angle MNP$



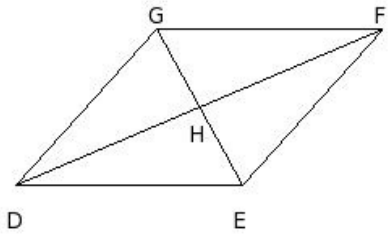
   (i) 55.11° (ii) 54.11° (iii) 57.11° (iv) 58.11° (v) 56.11°

4. In the adjoining figure, KLMN is a parallelogram in which
   $\angle NKM = 42.46°, \angle MKL = 31.28°, \angle NOM = 105.46°$. Calculate $\angle MNL$



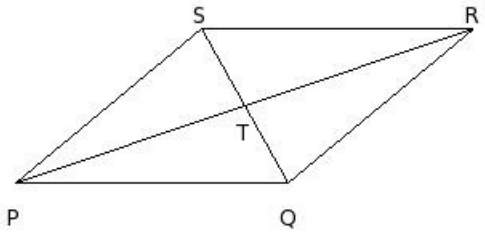
   (i) 43.26° (ii) 42.26° (iii) 41.26° (iv) 45.26° (v) 44.26°

5. In the adjoining figure, DEFG is a parallelogram in which
   $\angle GDF = 24.8°, \angle FDE = 23.02°, \angle GHF = 95.6°$. Calculate $\angle EFD$



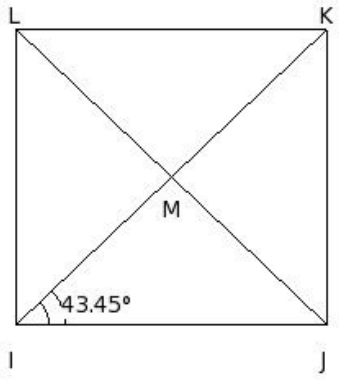
   (i) 22.80° (ii) 25.80° (iii) 26.80° (iv) 24.80° (v) 23.80°

6. In the adjoining figure, PQRS is a parallelogram in which $\angle SPR = 21.05°, \angle RPQ = 18.56°, \angle STR = 100.8°$. Calculate $\angle SQR$



(i) 79.75° (ii) 80.75° (iii) 78.75° (iv) 81.75° (v) 77.75°

7. In the adjoining figure, IJKL is a rectangle. If $\angle KIJ = 43.45°$, find $\angle IJL$



(i) 44.45° (ii) 41.45° (iii) 43.45° (iv) 42.45° (v) 45.45°

8. Three angles of quadrilateral measure 110.19°, 35.1° and 88.86° respectively. Find the measure of the fourth angle

(i) 126.85° (ii) 127.85° (iii) 125.85° (iv) 123.85° (v) 124.85°

9. Three angles of a quadrilateral are equal and the fourth angle measure 97.37°. What is the measure of each of the equal angles?

(i) 87.54° (ii) 88.54° (iii) 86.54° (iv) 89.54° (v) 85.54°

10. Two angles of a quadrilateral are of measure 97.37° and 65.17° respectively and the other two angles are equal. Find the measure of each of the equal angles.

(i) 97.73° (ii) 98.73° (iii) 96.73° (iv) 99.73° (v) 100.73°

11. A quadrilateral has three acute angles, each measuring 49°. What is the measure of its fourth angle?

(i) 214.00° (ii) 212.00° (iii) 213.00° (iv) 211.00° (v) 215.00°

12. One angle of a parallelogram measures $D = 56.25°$.
Find the measure of each of its remaining angles.

(i) $E=122.75°, F=55.25°, G=122.75°$ (ii) $E=123.75°, F=56.25°, G=123.75°$

(iii) $E=124.75°, F=57.25°, G=124.75°$ (iv) $E=121.75°, F=54.25°, G=121.75°$

(v) $E=125.75°, F=58.25°, G=125.75°$

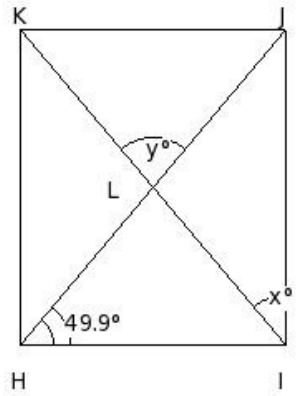
13. Two adjacent angles of a parallelogram are in the ratio $5 : 7$.
Find the measure of each of its angles.

(i) $A=73°, B=107°, C=74°, D=106°$ (ii) $A=76°, B=104°, C=77°, D=103°$

(iii) $A=77°, B=104°, C=73°, D=106°$ (iv) $A=74°, B=103°, C=76°, D=107°$

(v) $A=75°, B=105°, C=75°, D=105°$

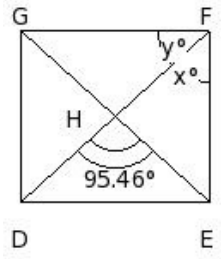
14. In the figure given below, HIJK is a rectangle. Find the values of x and y



(i) x=40.1°,y=80.2° (ii) x=42.1°,y=82.2° (iii) x=38.1°,y=78.2° (iv) x=41.1°,y=81.2°

(v) x=39.1°,y=79.2°

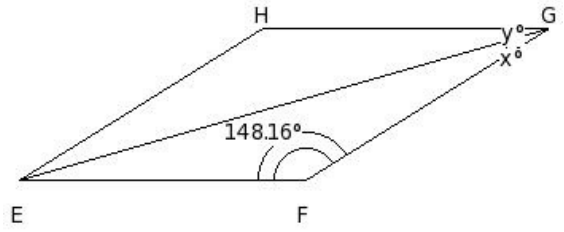
15. In the figure given below, DEFG is a rectangle. Find the values of x and y



(i) x=46.73°,y=41.27° (ii) x=49.73°,y=44.27° (iii) x=48.73°,y=43.27° (iv) x=47.73°,y=42.27°

(v) x=45.73°,y=40.27°

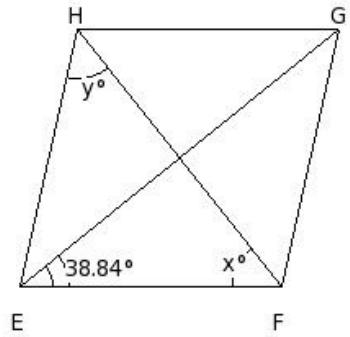
16. In the figure given below, EFGH is a rhombus. Find the values of x and y



(i) x=16.92°,y=16.92° (ii) x=17.92°,y=17.92° (iii) x=15.92°,y=15.92° (iv) x=14.92°,y=14.92°

(v) x=13.92°,y=13.92°

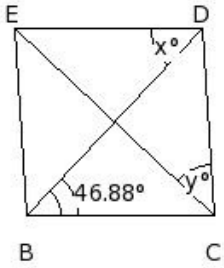
17. In the figure given below, EFGH is a rhombus. Find the values of x and y



(i) x=52.16°,y=52.16° (ii) x=50.16°,y=50.16° (iii) x=53.16°,y=53.16° (iv) x=51.16°,y=51.16°

(v) x=49.16°,y=49.16°

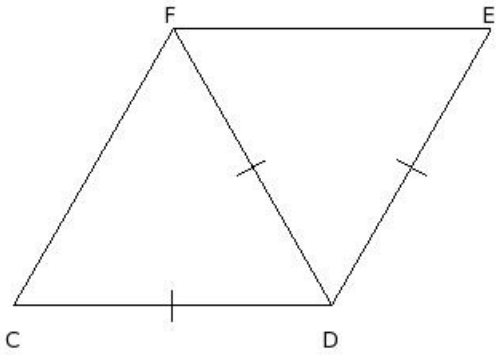
18. In the figure given below, BCDE is a rhombus. Find the values of x and y



(i) x=44.88°,y=41.12° (ii) x=47.88°,y=44.12° (iii) x=48.88°,y=45.12° (iv) x=46.88°,y=43.12°

(v) x=45.88°,y=42.12°

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

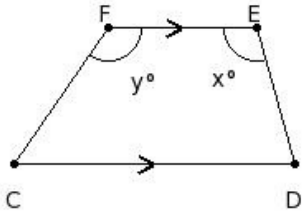


(i) C=62°,D=119°,E=58°,F=121° (ii) C=58°,D=122°,E=59°,F=121°

(iii) C=59°,D=118°,E=61°,F=122° (iv) C=61°,D=119°,E=62°,F=118°

(v) C=60°,D=120°,E=60°,F=120°

20. In the adjoining figure, CDEF is a trapezium in which $\overline{CD} \parallel \overline{EF}$.
If x = 105.67° and y = 124.8°, find the measures of ∠C and ∠D.

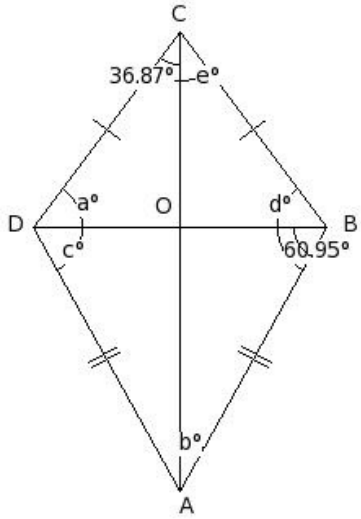


(i) C=56.2°,D=75.33° (ii) C=57.2°,D=76.33° (iii) C=55.2°,D=74.33° (iv) C=53.2°,D=72.33°

(v) C=54.2°,D=73.33°

21. 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 = 36.87° and ∠ABO = 60.95°, find the measure of each of the angles marked a,b,c,d and e.



(i) a = 53.13° , b = 30.05° , c = 60.95° , d = 53.13° , e = 36.87°

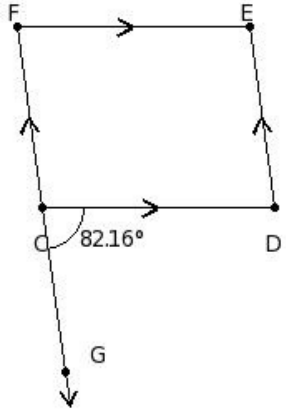
(ii) a = 53.13° , b = 30.05° , c = 59.95° , d = 53.13° , e = 36.87°

(iii) a = 53.13° , b = 30.05° , c = 59.95° , d = 55.13° , e = 34.87°

(iv) a = 53.13° , b = 30.05° , c = 59.95° , d = 55.13° , e = 36.87°

(v) a = 53.13° , b = 29.05° , c = 60.95° , d = 53.13° , e = 36.87°

22. In the adjoining figure, side FC of parallelogram CDEF has been produced to G. If ∠DCG = 82.16° , find the measure of each angle of the parallelogram.

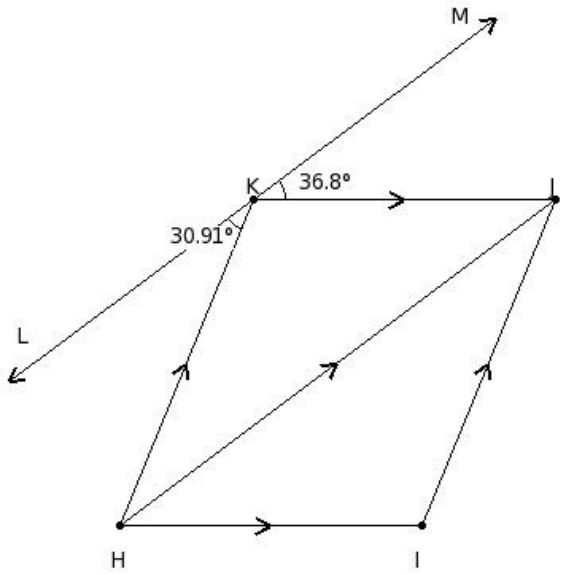


(i) C=97.84°,D=82.16°,E=97.84°,F=82.16° (ii) C=98.84°,D=81.16°,E=99.84°,F=80.16°

(iii) C=96.84°,D=80.16°,E=98.84°,F=84.16° (iv) C=95.84°,D=84.16°,E=96.84°,F=83.16°

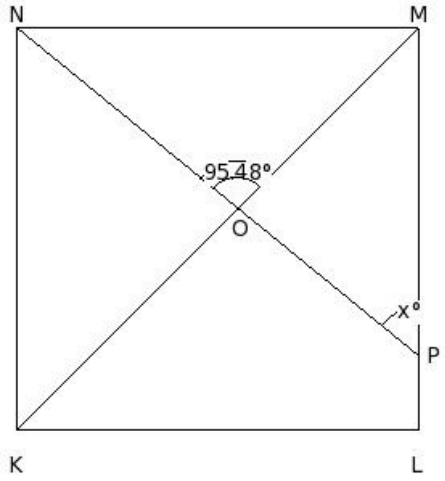
(v) C=99.84°,D=81.16°,E=95.84°,F=83.16°

23. In the adjoining figure, HIJK is a parallelogram and LM is such that $\overline{LM} \parallel \overline{HJ}$
If $\angle HKL = 30.91°$ and $\angle JKM = 36.8°$, find the measure of $\angle JKH$.



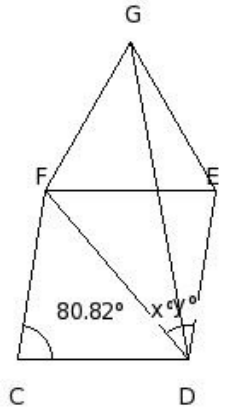
(i) 111.28° (ii) 113.28° (iii) 114.28° (iv) 110.28° (v) 112.28°

24. In the adjoining figure, KLMN is a square. A line segment NP cuts the side LM at P and the diagonal KM at O such that $\angle NOM = 95.48°$ and $\angle OPM = x°$. Find the value of x .



(i) 48.48° (ii) 52.48° (iii) 51.48° (iv) 50.48° (v) 49.48°

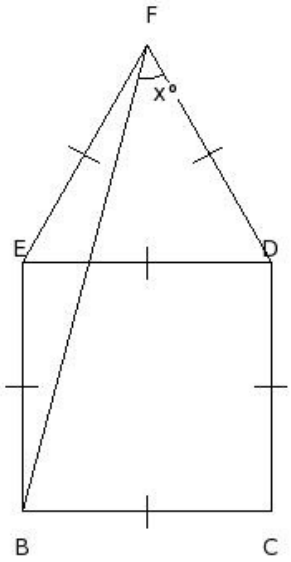
25. In the adjoining figure, CDEF is a rhombus and $\triangle GFE$ is an equilateral triangle. G and D are on opposite sides of EF. If $\angle FCD = 80.82°$, find the values of x and y .



(i) $x=31°, y=20.59°$ (ii) $x=28°, y=17.59°$ (iii) $x=29°, y=18.59°$ (iv) $x=30°, y=19.59°$

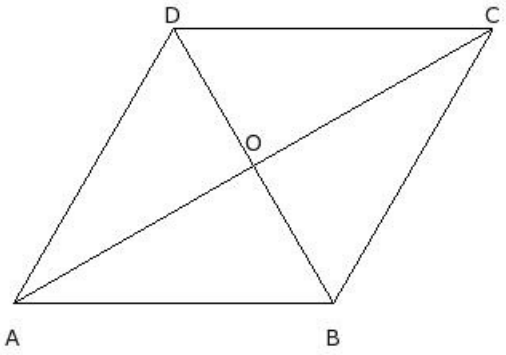
(v) $x=32°, y=21.59°$

26. In the adjoining figure, equilateral $\triangle EDF$ surmounts square BCDE. If DFB = x°, find the value of x.



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

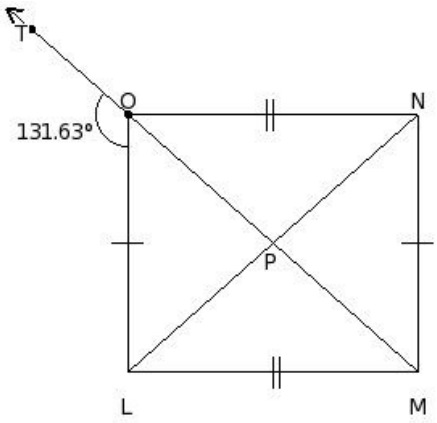
27. In the adjoining figure, ABCD is a rhombus whose diagonals intersect at O.
If $\angle OAB : \angle ABO = 2 : 4$, find the angles of $\triangle OAB$.



(i) O=92°,A=30°,B=58° (ii) O=88°,A=32°,B=60° (iii) O=88°,A=30°,B=62° (iv) O=90°,A=30°,B=60°

(v) O=90°,A=28°,B=62°

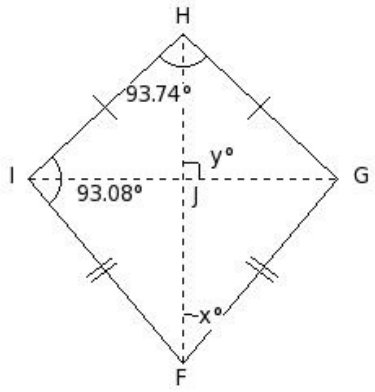
28. In the given figure, LMNO is a rectangle whose diagonals intersect at P.
Diagonal MO is produced to T and $\angle LOT = 131.63°$. Find the angles of $\triangle PNO$.



(i) P=94.74°,N=41.63°,O=43.63° (ii) P=96.74°,N=41.63°,O=41.63° (iii) P=94.74°,N=43.63°,O=41.63°

(iv) P=98.74°,N=41.63°,O=39.63° (v) P=96.74°,N=39.63°,O=43.63°

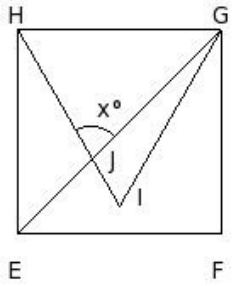
29. In the given figure, FGHI is a kite whose diagonals intersect at J.
If ∠GHI = 93.74° and ∠HIF = 93.08°, calculate ∠JFG and ∠HJG.



(i) x=42.05°,y=92° (ii) x=38.05°,y=88° (iii) x=41.05°,y=91° (iv) x=40.05°,y=90°

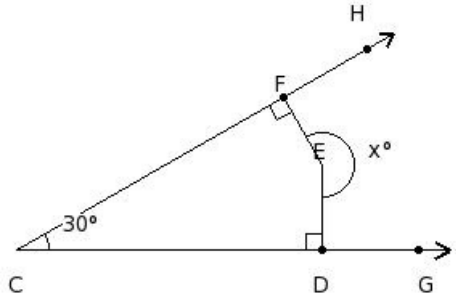
(v) x=39.05°,y=89°

30. △IGH is an equilateral triangle in a square EFGH.
If EG and HI intersect at J, then find the value of x.



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

31. In the adjoining figure, E is a point in the interior of ∠GCH.
If ED⊥CG and EF⊥CH and ∠GCH = 30°, find the measure of x .



(i) 211° (ii) 208° (iii) 210° (iv) 209° (v) 212°

32. The measures of three angles of a quadrilateral are 97.18°, 88.42° and 85.98°. Find the fourth angle

(i) 93.42° (ii) 118.42° (iii) 98.42° (iv) 103.42° (v) 88.42°

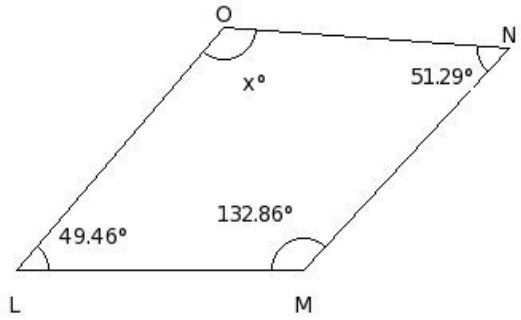
33. Sum of the interior angles in a quadrilateral is

(i) 390° (ii) 360° (iii) 365° (iv) 370° (v) 375°

34. How many diagonals does a quadrilateral have?

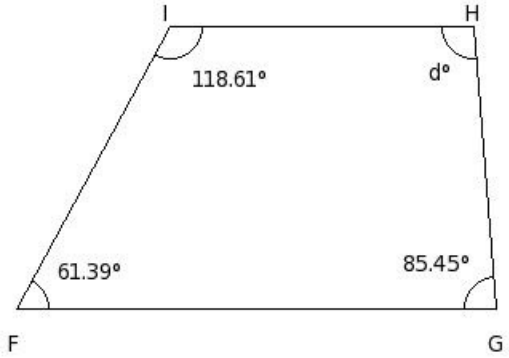
(i) 4 (ii) 1 (iii) 2 (iv) 0 (v) 3

35. Find the missing angle in the given quadrilateral



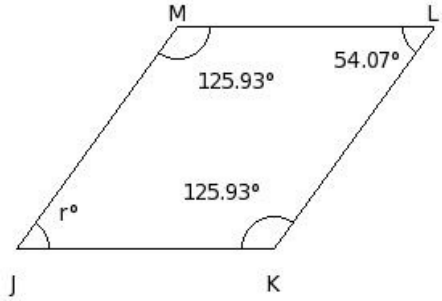
(i) 126.39° (ii) 136.39° (iii) 141.39° (iv) 131.39° (v) 156.39°

36. Find the missing angle in the given trapezium



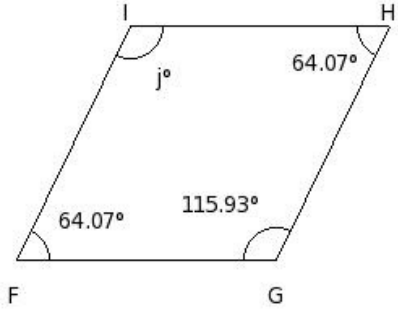
(i) 99.55° (ii) 94.55° (iii) 104.55° (iv) 109.55° (v) 124.55°

37. Find the missing angle in the given parallelogram



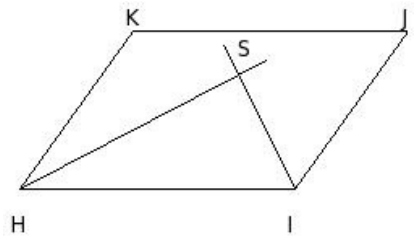
(i) 64.07° (ii) 54.07° (iii) 69.07° (iv) 84.07° (v) 59.07°

38. Find the missing angle in the given rhombus



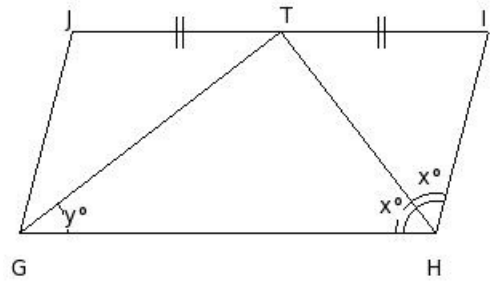
(i) 120.93° (ii) 125.93° (iii) 145.93° (iv) 130.93° (v) 115.93°

39. In the given figure, HIJK is a parallelogram.
If HS and IS are bisector of ∠H & ∠I, find ∠S



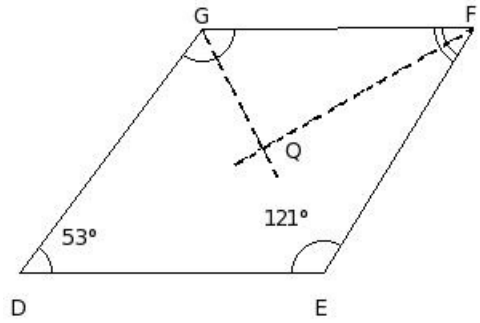
(i) 91° (ii) 92° (iii) 90° (iv) 89° (v) 88°

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



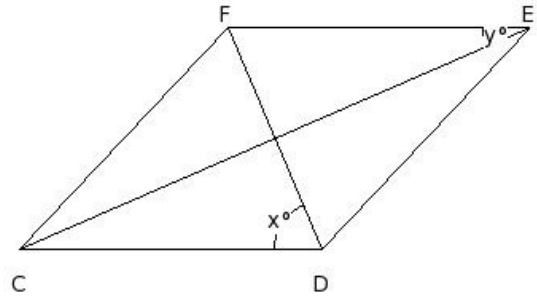
(i) 38° (ii) 37° (iii) 40° (iv) 36° (v) 39°

41. In the given figure, DEFG is a quadrilateral. QG and QF are bisectors of ∠G & ∠F meeting at Q. Find ∠FQG



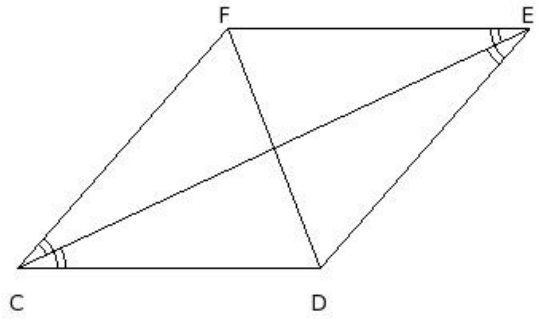
(i) 87.0° (ii) 85.0° (iii) 88.0° (iv) 89.0° (v) 86.0°

42. In the given figure, CDEF is a rhombus. Given x = 67°, find the value of 'y'.



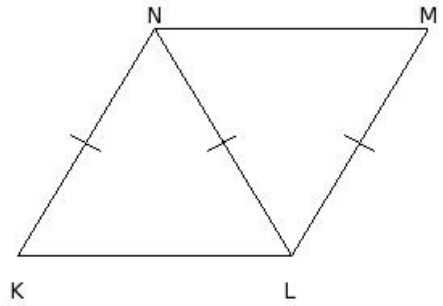
(i) 25° (ii) 23° (iii) 21° (iv) 24° (v) 22°

43. In the given figure, CDEF is a parallelogram. CE bisects ∠C & ∠E.
Given CE = 12 cm and DF = 8 cm, find CD



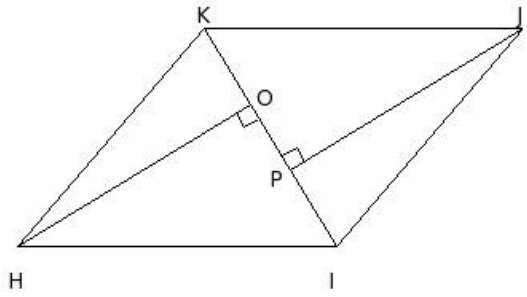
(i) 9.21 cm (ii) 5.21 cm (iii) 8.21 cm (iv) 6.21 cm (v) 7.21 cm

44. In the given figure, KLMN is a parallelogram. LN is the diagonal such that KN = LN = LM. Given ∠K = 59°, find ∠NLM



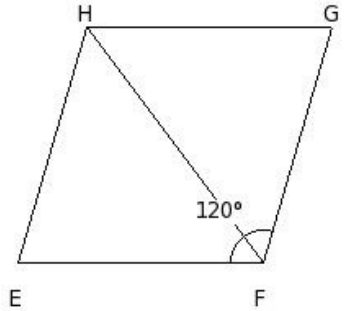
(i) 63° (ii) 62° (iii) 64° (iv) 60° (v) 61°

45. In the given figure, HIJK is a parallelogram. HO and JP are perpendicular to the diagonal IK. Given ∠PJK = 31°, find ∠KIH



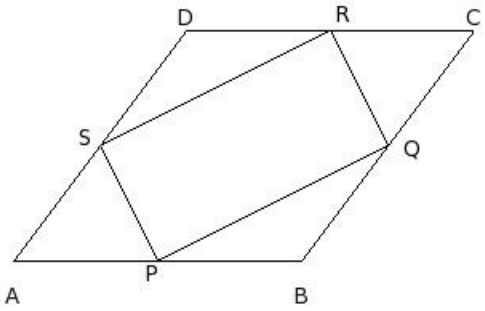
(i) 58° (ii) 60° (iii) 59° (iv) 61° (v) 57°

46. In the given figure, EFGH is a rhombus such that ∠F = 120°. Then △EFH is



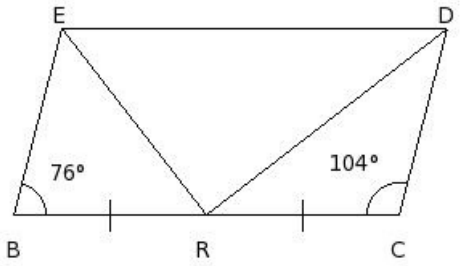
(i) Right angled triangle (ii) Isosceles triangle (iii) Obtuse angled triangle (iv) Equilateral triangle

47. ABCD is a rhombus. P, Q, R and S are mid-points of sides AB, BC, CD and DA. Find ∠QRS



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

48. In the given figure, BCDE is a parallelogram such that R is the mid-point of BC and BC = 2EB. Find ∠ERD



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

Assignment Key

1) (i)	2) (v)	3) (v)	4) (i)	5) (iv)	6) (i)
7) (iii)	8) (iii)	9) (i)	10) (ii)	11) (iii)	12) (ii)
13) (v)	14) (i)	15) (iv)	16) (iii)	17) (iv)	18) (iv)
19) (v)	20) (iii)	21) (v)	22) (i)	23) (v)	24) (iv)
25) (iv)	26) (iii)	27) (iv)	28) (ii)	29) (iv)	30) (ii)
31) (iii)	32) (v)	33) (ii)	34) (iii)	35) (i)	36) (ii)
37) (ii)	38) (v)	39) (iii)	40) (i)	41) (i)	42) (ii)
43) (v)	44) (ii)	45) (iii)	46) (iv)	47) (ii)	48) (i)

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