EduSahara™ Assignment

Name : Quadrilateral Angle Problems

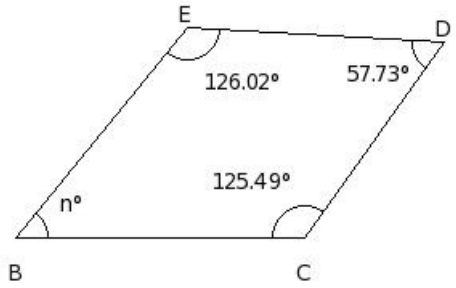
Chapter : Quadrilaterals

Grade : SSC Grade VII

1. The measures of three angles of a quadrilateral are $76.33°, 102.15°$ and $72.44°$. Find the fourth angle

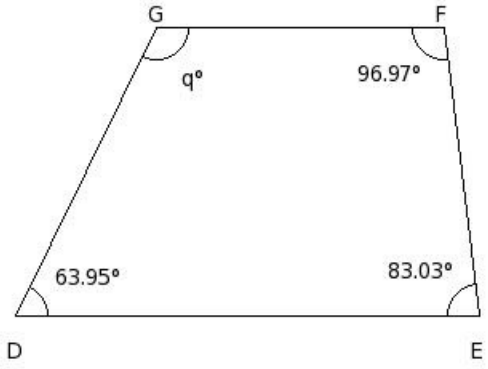
   (i) 119.08° (ii) 139.08° (iii) 114.08° (iv) 109.08° (v) 124.08°

2. Find the missing angle in the given quadrilateral



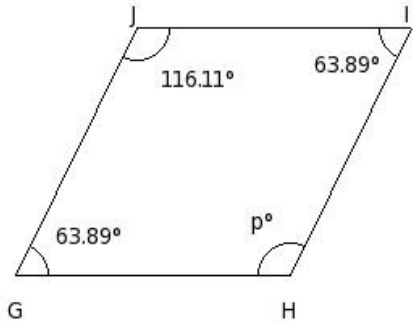
   (i) 60.76° (ii) 65.76° (iii) 50.76° (iv) 55.76° (v) 80.76°

3. Find the missing angle in the given trapezium



   (i) 131.05° (ii) 146.05° (iii) 126.05° (iv) 116.05° (v) 121.05°

4. Find the missing angle in the given rhombus



   (i) 116.11° (ii) 146.11° (iii) 131.11° (iv) 126.11° (v) 121.11°

5. In parallelogram ABCD, if $\angle D = 142.64°$, then find the value of $\angle B$

   (i) 143.64° (ii) 140.64° (iii) 141.64° (iv) 144.64° (v) 142.64°

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

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

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

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

8. If ABCD is an isosceles trapezium, ∠A =

(i) ∠C (ii) ∠B (iii) 90° (iv) ∠D

BCDE is a rhombus in which ∠B = 120° .

9. $\overline{CE}$

is the diagonal. Then △BCD is

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

(v) None of these

ABCD is a rhombus in which ∠A = 131° .

10. $\overline{BD}$

is the diagonal. Then △ABC is

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

(v) a scalene triangle

11. The angles of a quadrilateral CDEF are in the ratio 21 : 26 : 15 : 118. Find the measure of each angle of the quadrilateral.

(i) C=42°,D=52°,E=30°,F=236° (ii) C=41°,D=50°,E=31°,F=238° (iii) C=43°,D=51°,E=32°,F=234°

(iv) C=44°,D=51°,E=28°,F=237° (v) C=40°,D=54°,E=29°,F=237°

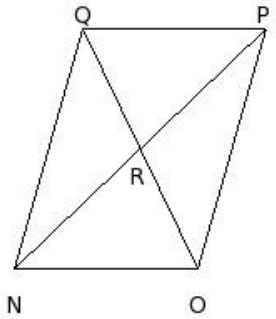
12. Two adjacent angles of a parallelogram LMNO are in the ratio 4 : 6. Find the measure of each of its angles.

(i) L=72°,M=108°,N=72°,O=108° (ii) L=70°,M=110°,N=71°,O=109°

(iii) L=73°,M=107°,N=74°,O=106° (iv) L=71°,M=106°,N=73°,O=110°

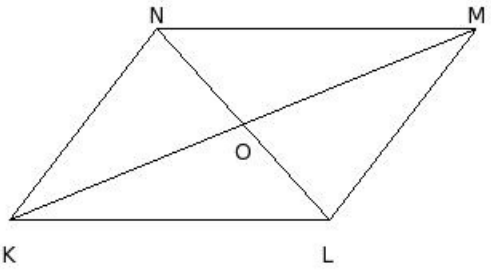
(v) L=74°,M=107°,N=70°,O=109°

13. In the adjoining figure, NOPQ is a parallelogram in which ∠QNP = 30.28°, ∠PNO = 43.83°, ∠QRP = 71.83°. Calculate ∠NOQ



(i) 62.34° (ii) 64.34° (iii) 66.34° (iv) 65.34° (v) 63.34°

14. In the adjoining figure, KLMN is a parallelogram in which $\angle NKM = 30.29°, \angle MKL = 22°, \angle NOM = 109.65°$. Calculate $\angle MNL$



(i) 49.35° (ii) 48.35° (iii) 46.35° (iv) 50.35° (v) 47.35°

15. Three angles of quadrilateral measure 141.61°, 44.47° and 142.13° respectively. Find the measure of the fourth angle

(i) 29.79° (ii) 32.79° (iii) 31.79° (iv) 30.79° (v) 33.79°

16. Three angles of a quadrilateral are equal and the fourth angle measure 110.93°. What is the measure of each of the equal angles?

(i) 82.02° (ii) 83.02° (iii) 85.02° (iv) 81.02° (v) 84.02°

17. Two angles of a quadrilateral are of measure 48.19° and 142.03° respectively and the other two angles are equal. Find the measure of each of the equal angles.

(i) 84.89° (ii) 86.89° (iii) 83.89° (iv) 85.89° (v) 82.89°

18. A quadrilateral has three acute angles, each measuring 30°. What is the measure of its fourth angle?

(i) 270.00° (ii) 268.00° (iii) 272.00° (iv) 271.00° (v) 269.00°

19. One angle of a parallelogram measures $M = 47.91°$.
Find the measure of each of its remaining angles.

(i) $N=132.09°, O=47.91°, P=132.09°$ (ii) $N=131.09°, O=46.91°, P=131.09°$

(iii) $N=130.09°, O=45.91°, P=130.09°$ (iv) $N=134.09°, O=49.91°, P=134.09°$

(v) $N=133.09°, O=48.91°, P=133.09°$

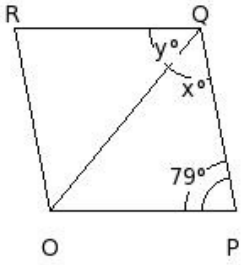
20. Two adjacent angles of a parallelogram are in the ratio $2 : 10$.
Find the measure of each of its angles.

(i) $A=29°, B=148°, C=31°, D=152°$ (ii) $A=31°, B=149°, C=32°, D=148°$

(iii) $A=32°, B=149°, C=28°, D=151°$ (iv) $A=30°, B=150°, C=30°, D=150°$

(v) $A=28°, B=152°, C=29°, D=151°$

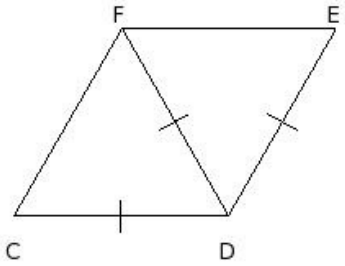
21. In the figure given below, OPQR is a rhombus. Find the values of x and y



(i) $x=51.5°, y=51.5°$ (ii) $x=48.5°, y=48.5°$ (iii) $x=50.5°, y=50.5°$ (iv) $x=52.5°, y=52.5°$

(v) $x=49.5°, y=49.5°$

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

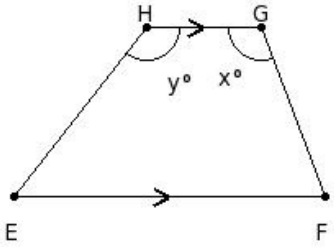


(i) C=58°,D=122°,E=59°,F=121° (ii) C=61°,D=119°,E=62°,F=118°

(iii) C=62°,D=119°,E=58°,F=121° (iv) C=59°,D=118°,E=61°,F=122°

(v) C=60°,D=120°,E=60°,F=120°

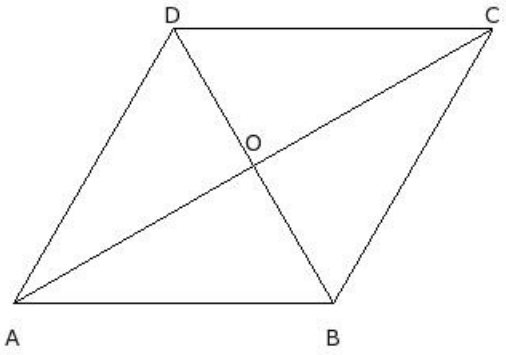
23. In the adjoining figure, EFGH is a trapezium in which $\overline{EF} \parallel \overline{GH}$.
If $x = 110.74°$ and $y = 128.18°$, find the measures of $\angle E$ and $\angle F$.



(i) E=52.82°,F=70.26° (ii) E=49.82°,F=67.26° (iii) E=53.82°,F=71.26° (iv) E=51.82°,F=69.26°

(v) E=50.82°,F=68.26°

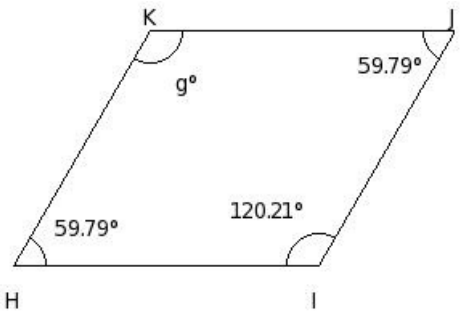
24. In the adjoining figure, ABCD is a rhombus whose diagonals intersect at O.
If $\angle OAB : \angle ABO = 1 : 2$, find the angles of $\triangle OAB$.



(i) O=92°,A=30°,B=58° (ii) O=88°,A=32°,B=60° (iii) O=90°,A=28°,B=62° (iv) O=90°,A=30°,B=60°

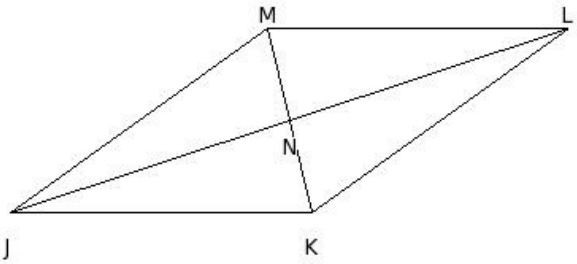
(v) O=88°,A=30°,B=62°

25. Find the missing angle in the given parallelogram



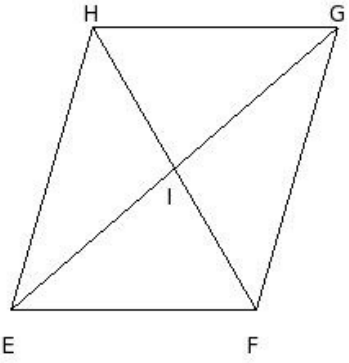
(i) 120.21° (ii) 125.21° (iii) 135.21° (iv) 150.21° (v) 130.21°

26. In the adjoining figure, JKLM is a parallelogram in which ∠MJL = 17.37°, ∠LJK = 18.24°, ∠MNL = 85.33°. Calculate ∠KLJ



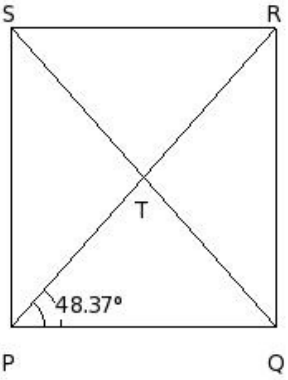
(i) 19.37° (ii) 16.37° (iii) 15.37° (iv) 18.37° (v) 17.37°

27. In the adjoining figure, EFGH is a parallelogram in which ∠HEG = 33.18°, ∠GEF = 40.7°, ∠HIG = 78.87°. Calculate ∠HFG



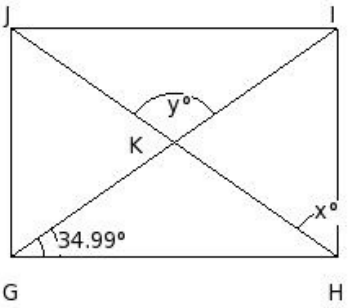
(i) 46.69° (ii) 47.69° (iii) 44.69° (iv) 43.69° (v) 45.69°

28. In the adjoining figure, PQRS is a rectangle. If ∠RPQ = 48.37°, find ∠RTQ



(i) 98.74° (ii) 97.74° (iii) 96.74° (iv) 95.74° (v) 94.74°

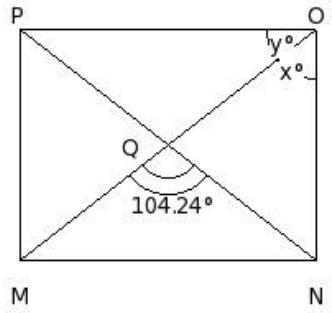
29. In the figure given below, GHIJ is a rectangle. Find the values of x and y



(i) x=57.01°,y=112.02° (ii) x=55.01°,y=110.02° (iii) x=53.01°,y=108.02° (iv) x=54.01°,y=109.02°

(v) x=56.01°,y=111.02°

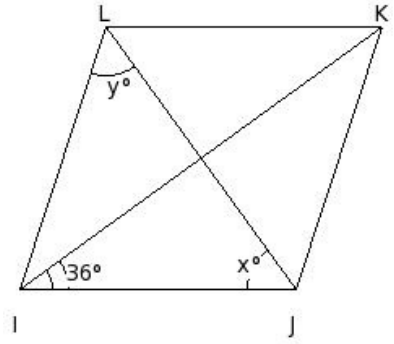
30. In the figure given below, MNOP is a rectangle. Find the values of x and y



(i) x=50.12°,y=35.88° (ii) x=52.12°,y=37.88° (iii) x=53.12°,y=38.88° (iv) x=51.12°,y=36.88°

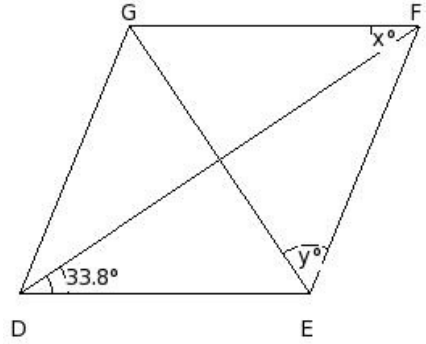
(v) x=54.12°,y=39.88°

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



(i) x=52°,y=52° (ii) x=53°,y=53° (iii) x=54°,y=54° (iv) x=55°,y=55° (v) x=56°,y=56°

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

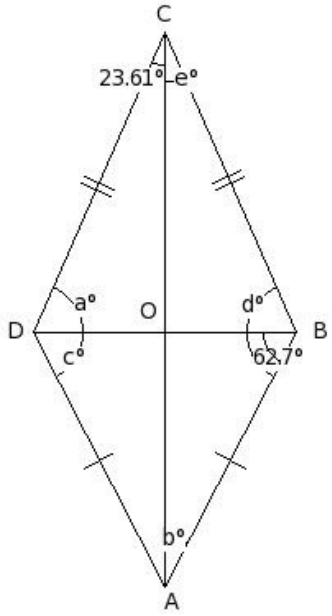


(i) x=31.8°,y=54.2° (ii) x=35.8°,y=58.2° (iii) x=32.8°,y=55.2° (iv) x=34.8°,y=57.2°

(v) x=33.8°,y=56.2°

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 $\angle OCD = 23.61°$ and $\angle ABO = 62.7°$, find the measure of each of the angles marked a,b,c,d and e.



(i) a = 66.39° , b = 28.3° , c = 61.7° , d = 66.39° , e = 23.61°

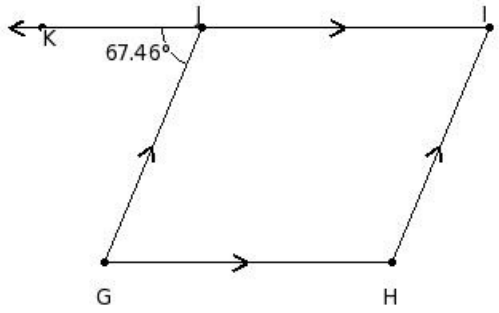
(ii) a = 66.39° , b = 28.3° , c = 61.7° , d = 68.39° , e = 21.61°

(iii) a = 66.39° , b = 28.3° , c = 61.7° , d = 68.39° , e = 23.61°

(iv) a = 66.39° , b = 27.3° , c = 62.7° , d = 66.39° , e = 23.61°

(v) a = 66.39° , b = 28.3° , c = 62.7° , d = 66.39° , e = 23.61°

34. In the adjoining figure, side IJ of parallelogram GHIJ has been produced to K. If $\angle GJK = 67.46°$, find the measure of each angle of the parallelogram.

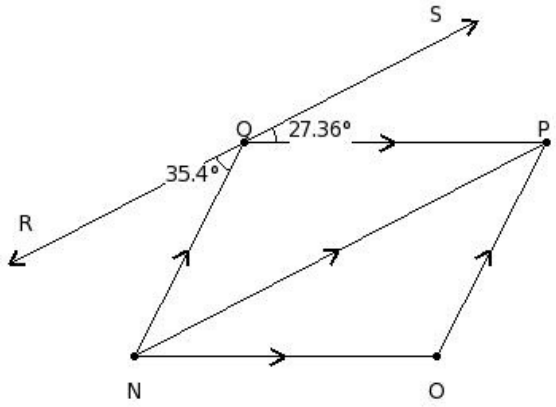


(i) G=65.46°,H=114.54°,I=66.46°,J=113.54° (ii) G=68.46°,H=111.54°,I=69.46°,J=110.54°

(iii) G=67.46°,H=112.54°,I=67.46°,J=112.54° (iv) G=66.46°,H=110.54°,I=68.46°,J=114.54°

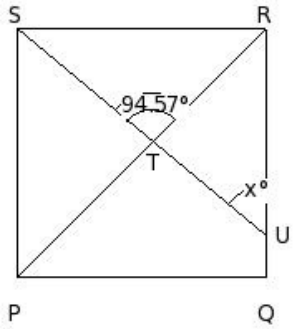
(v) G=69.46°,H=111.54°,I=65.46°,J=113.54°

35. In the adjoining figure, NOPQ is a parallelogram and RS is such that $\overline{RS} \parallel \overline{NP}$
If $\angle NQR = 35.4°$ and $\angle PQS = 27.36°$, find the measure of $\angle PQN$.



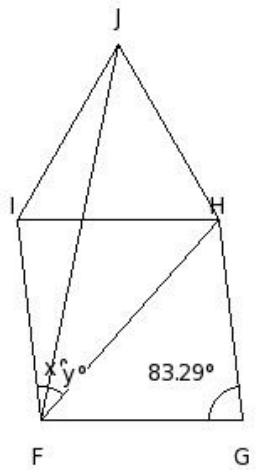
(i) 116.25° (ii) 117.25° (iii) 119.25° (iv) 118.25° (v) 115.25°

36. In the adjoining figure, PQRS is a square. A line segment SU cuts the side QR at U and the diagonal PR at T such that $\angle STR = 94.57°$ and $\angle TUR = x°$. Find the value of x .



(i) 51.57° (ii) 48.57° (iii) 49.57° (iv) 50.57° (v) 47.57°

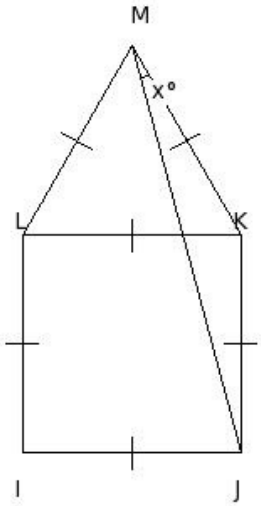
37. In the adjoining figure, FGHI is a rhombus and △JIH is an equilateral triangle. J and F are on opposite sides of HI. If $\angle FGH = 83.29°$, find the values of x and y .



(i) $x=18.35°, y=30°$ (ii) $x=16.35°, y=28°$ (iii) $x=19.35°, y=31°$ (iv) $x=17.35°, y=29°$

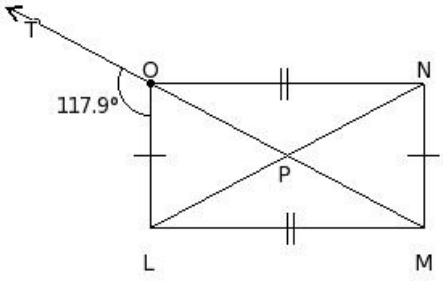
(v) $x=20.35°, y=32°$

38. In the adjoining figure, equilateral $\triangle LKM$ surmounts square IJKL. If KMJ = x°, find the value of x.



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

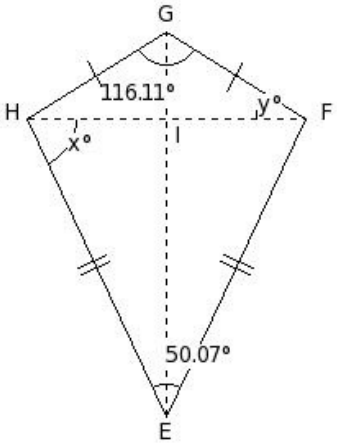
39. In the given figure, LMNO is a rectangle whose diagonals intersect at P.
Diagonal MO is produced to T and $\angle LOT = 117.9°$. Find the angles of $\triangle PLM$.



(i) P=122.2°,L=27.9°,M=29.9° (ii) P=124.2°,L=27.9°,M=27.9° (iii) P=122.2°,L=29.9°,M=27.9°

(iv) P=126.2°,L=27.9°,M=25.9° (v) P=124.2°,L=25.9°,M=29.9°

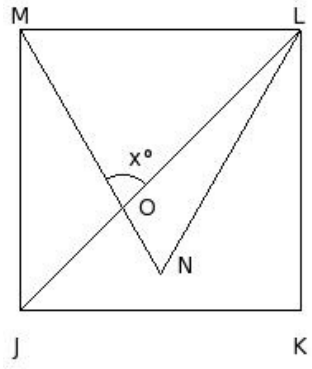
40. In the given figure, EFGH is a kite whose diagonals intersect at I.
If $\angle HEF = 50.07°$ and $\angle FGH = 116.11°$, calculate $\angle IHE$ and $\angle IFG$.



(i) x=66.97°,y=33.94° (ii) x=64.97°,y=31.94° (iii) x=62.97°,y=29.94° (iv) x=63.97°,y=30.94°

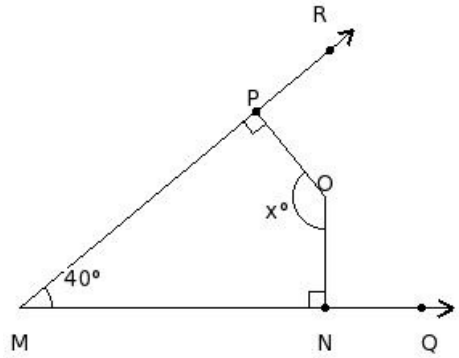
(v) x=65.97°,y=32.94°

41. $\triangle NLM$ is an equilateral triangle in a square JKLM.
If JL and MN intersect at O, then find the value of x.



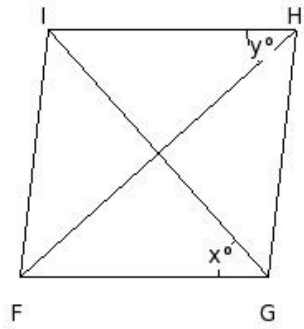
(i) 73° (ii) 75° (iii) 76° (iv) 77° (v) 74°

42. In the adjoining figure, O is a point in the interior of $\angle QMR$.
If $ON \perp MQ$ and $OP \perp MR$ and $\angle QMR = 40°$, find the measure of x .



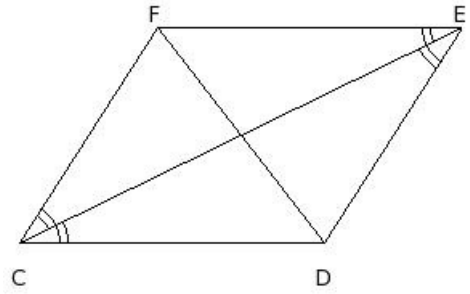
(i) 141° (ii) 142° (iii) 138° (iv) 140° (v) 139°

43. In the given figure, FGHI is a rhombus. Given x = 48°, find the value of 'y'.



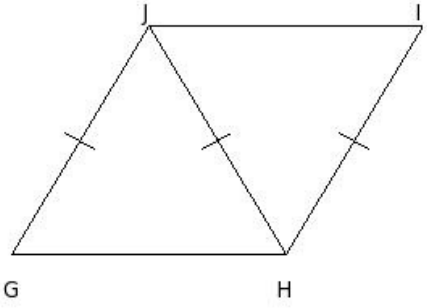
(i) 40° (ii) 44° (iii) 43° (iv) 42° (v) 41°

44. In the given figure, CDEF is a parallelogram. CE bisects $\angle C$ & $\angle E$.
Given CE = 15 cm and DF = 10 cm, find CD



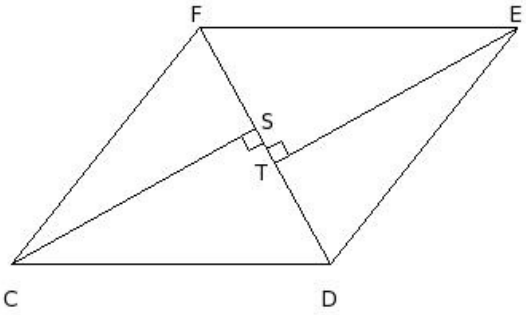
(i) 9.01 cm (ii) 7.01 cm (iii) 10.01 cm (iv) 8.01 cm (v) 11.01 cm

45. In the given figure, GHIJ is a parallelogram. HJ is the diagonal such that GJ = HJ = HI. Given ∠G = 59°, find ∠JHI



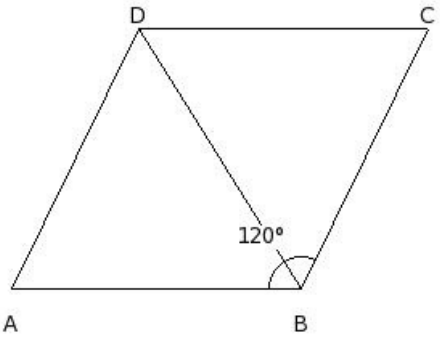
(i) 63° (ii) 62° (iii) 64° (iv) 61° (v) 60°

46. In the given figure, CDEF is a parallelogram. CS and ET are perpendicular to the diagonal DF. Given ∠SCD = 29°, find ∠EFD



(i) 59° (ii) 61° (iii) 63° (iv) 60° (v) 62°

47. In the given figure, ABCD is a rhombus such that ∠B = 120°. Then △ABD is



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

Assignment Key

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