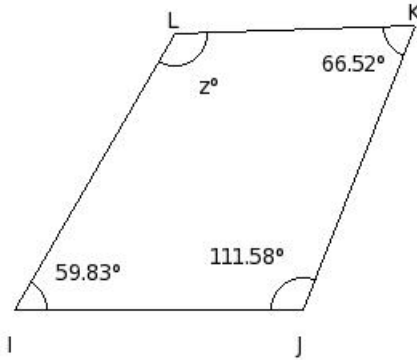


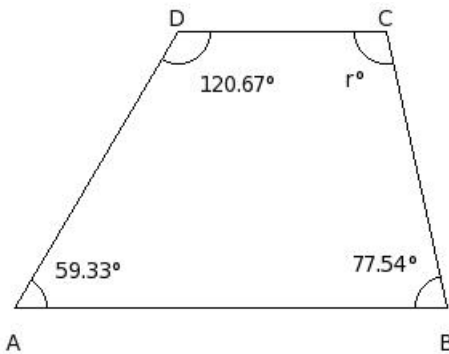
EduSahara™ Learning Center Assignment**Grade : Class IX, SSC****Chapter : Quadrilaterals****Name : Angle Computation**

1. Find the missing angle in the given quadrilateral



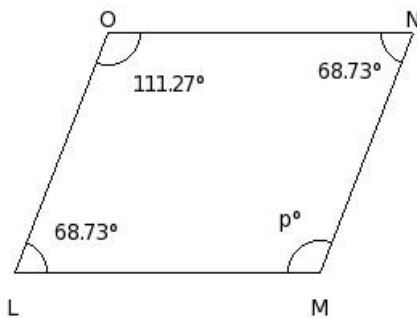
- (i) 152.08° (ii) 127.08° (iii) 122.08° (iv) 137.08° (v) 132.08°

2. Find the missing angle in the given trapezium



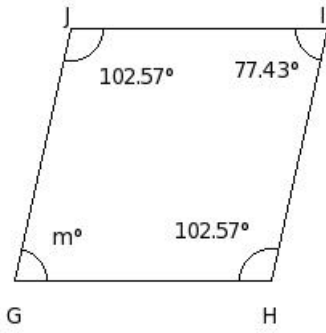
- (i) 117.46° (ii) 102.46° (iii) 112.46° (iv) 107.46° (v) 132.46°

3. Find the missing angle in the given parallelogram



- (i) 126.27° (ii) 141.27° (iii) 121.27° (iv) 111.27° (v) 116.27°

4. Find the missing angle in the given rhombus



- (i) 82.43° (ii) 107.43° (iii) 92.43° (iv) 77.43° (v) 87.43°

5. The measures of three angles of a quadrilateral are 68.68° , 97.26° and 67.38° . Find the fourth angle

- (i) 126.68° (ii) 141.68° (iii) 131.68° (iv) 156.68° (v) 136.68°

6. Sum of the interior angles in a quadrilateral is

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

7. In parallelogram ABCD, if $\angle C = 65.81^\circ$, then find the value of $\angle D$

- (i) 114.19° (ii) 113.19° (iii) 112.19° (iv) 116.19° (v) 115.19°

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

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

9. If ABCD is an isosceles trapezium, $\angle A =$

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

10. ABCD is a rhombus in which $\angle A = 120^\circ$. $\overline{AC}$ is the diagonal. Then $\triangle ABC$ is

- (i) an acute angled triangle (ii) an equilateral triangle
(iii) a scalene triangle (iv) an isosceles triangle
(v) None of these

11. BCDE is a rhombus in which $\angle B = 114^\circ$. $\overline{BD}$ is the diagonal. Then $\triangle BCD$ is

- (i) an acute angled triangle (ii) an equilateral triangle
(iii) None of these (iv) an isosceles triangle
(v) a scalene triangle

12. The angles of a quadrilateral HIJK are in the ratio $4 : 6 : 9 : 17$. Find the measure of each angle of the quadrilateral.

- (i) $H = 38^\circ$, $I = 62^\circ$, $J = 89^\circ$, $K = 171^\circ$
(ii) $H = 41^\circ$, $I = 59^\circ$, $J = 92^\circ$, $K = 168^\circ$

(iii) $H = 42^\circ$, $I = 59^\circ$, $J = 88^\circ$, $K = 171^\circ$

(iv) $H = 39^\circ$, $I = 58^\circ$, $J = 91^\circ$, $K = 172^\circ$

(v) $H = 40^\circ$, $I = 60^\circ$, $J = 90^\circ$, $K = 170^\circ$

13. Two adjacent angles of a parallelogram NOPQ are in the ratio 4 : 32 .
Find the measure of each of its angles.

(i) $N = 20^\circ$, $O = 160^\circ$, $P = 20^\circ$, $Q = 160^\circ$

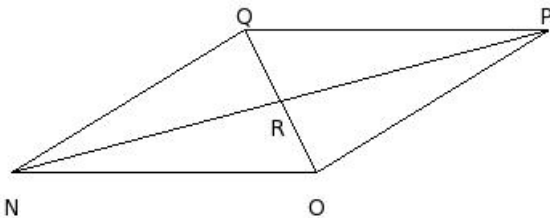
(ii) $N = 18^\circ$, $O = 162^\circ$, $P = 19^\circ$, $Q = 161^\circ$

(iii) $N = 21^\circ$, $O = 159^\circ$, $P = 22^\circ$, $Q = 158^\circ$

(iv) $N = 19^\circ$, $O = 158^\circ$, $P = 21^\circ$, $Q = 162^\circ$

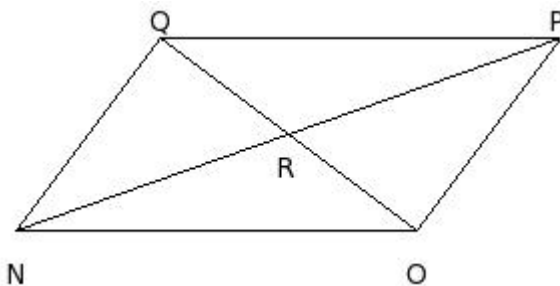
(v) $N = 22^\circ$, $O = 159^\circ$, $P = 18^\circ$, $Q = 161^\circ$

14. In the adjoining figure, NOPQ is a parallelogram in which
 $\angle QNP = 16.49^\circ$, $\angle PNO = 14.76^\circ$, $\angle QRP = 101.89^\circ$. Calculate $\angle NOQ$



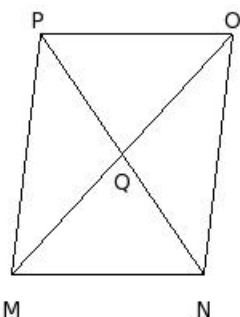
(i) 62.35° (ii) 65.35° (iii) 64.35° (iv) 61.35° (v) 63.35°

15. In the adjoining figure, NOPQ is a parallelogram in which
 $\angle QNP = 33.69^\circ$, $\angle PNO = 19.44^\circ$, $\angle QRP = 123.69^\circ$. Calculate $\angle PQO$



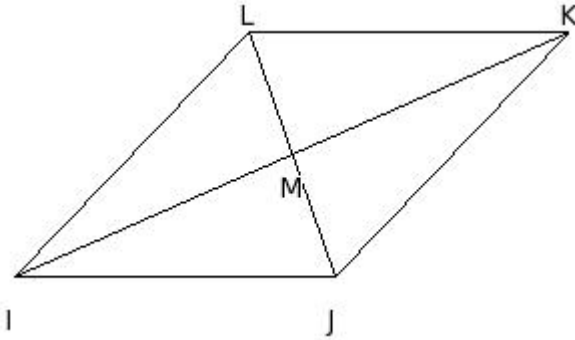
(i) 34.87° (ii) 36.87° (iii) 38.87° (iv) 35.87° (v) 37.87°

16. In the adjoining figure, MNOP is a parallelogram in which
 $\angle PMO = 36.11^\circ$, $\angle OMN = 47^\circ$, $\angle PQO = 76.83^\circ$. Calculate $\angle NOM$



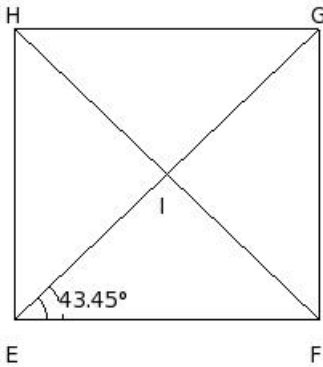
- (i) 34.11° (ii) 35.11° (iii) 37.11° (iv) 38.11° (v) 36.11°

17. In the adjoining figure, IJKL is a parallelogram in which $\angle LIK = 22.35^\circ$, $\angle KIJ = 23.85^\circ$, $\angle LMK = 85.31^\circ$. Calculate $\angle LJK$



- (i) 62.96° (ii) 60.96° (iii) 61.96° (iv) 63.96° (v) 64.96°

18. In the adjoining figure, EFGH is a rectangle. If $\angle GEF = 43.45^\circ$, find $\angle EFH$



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

19. Three angles of quadrilateral measure 91.16° , 124.67° and 41.08° respectively. Find the measure of the fourth angle

- (i) 104.09° (ii) 103.09° (iii) 105.09° (iv) 101.09° (v) 102.09°

20. Three angles of a quadrilateral are equal and the fourth angle measure 70.53° . What is the measure of each of the equal angles?

- (i) 97.49° (ii) 94.49° (iii) 98.49° (iv) 96.49° (v) 95.49°

21. Two angles of a quadrilateral are of measure 59.41° and 127° respectively and the other two angles are equal. Find the measure of each of the equal angles.

- (i) 86.80° (ii) 88.80° (iii) 84.80° (iv) 87.80° (v) 85.80°

22. A quadrilateral has three acute angles, each measuring 42° . What is the measure of its fourth angle?

- (i) 236.00° (ii) 233.00° (iii) 234.00° (iv) 235.00° (v) 232.00°

23. One angle of a parallelogram measures $H = 51.32^\circ$. Find the measure of each of its remaining angles.

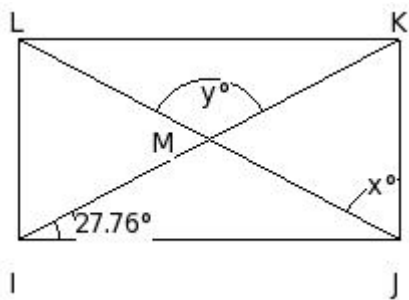
- (i) $I = 126.68^\circ$, $J = 49.32^\circ$, $K = 126.68^\circ$

- (ii) $I = 130.68^\circ$, $J = 53.32^\circ$, $K = 130.68^\circ$
- (iii) $I = 128.68^\circ$, $J = 51.32^\circ$, $K = 128.68^\circ$
- (iv) $I = 129.68^\circ$, $J = 52.32^\circ$, $K = 129.68^\circ$
- (v) $I = 127.68^\circ$, $J = 50.32^\circ$, $K = 127.68^\circ$

24. Two adjacent angles of a parallelogram are in the ratio 3 : 33 .
Find the measure of each of its angles.

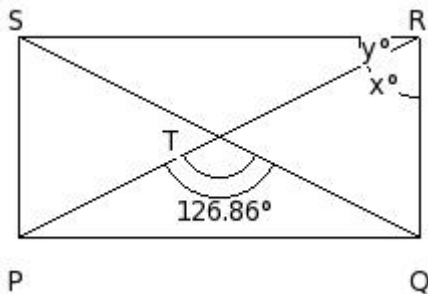
- (i) $A = 13^\circ$, $B = 167^\circ$, $C = 14^\circ$, $D = 166^\circ$
- (ii) $A = 16^\circ$, $B = 164^\circ$, $C = 17^\circ$, $D = 163^\circ$
- (iii) $A = 17^\circ$, $B = 164^\circ$, $C = 13^\circ$, $D = 166^\circ$
- (iv) $A = 15^\circ$, $B = 165^\circ$, $C = 15^\circ$, $D = 165^\circ$
- (v) $A = 14^\circ$, $B = 163^\circ$, $C = 16^\circ$, $D = 167^\circ$

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



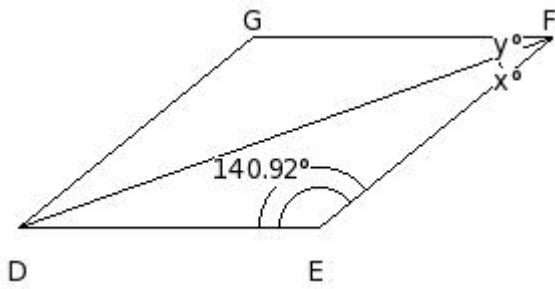
- (i) $x = 63.24^\circ$, $y = 125.48^\circ$
- (ii) $x = 64.24^\circ$, $y = 126.48^\circ$
- (iii) $x = 60.24^\circ$, $y = 122.48^\circ$
- (iv) $x = 61.24^\circ$, $y = 123.48^\circ$
- (v) $x = 62.24^\circ$, $y = 124.48^\circ$

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



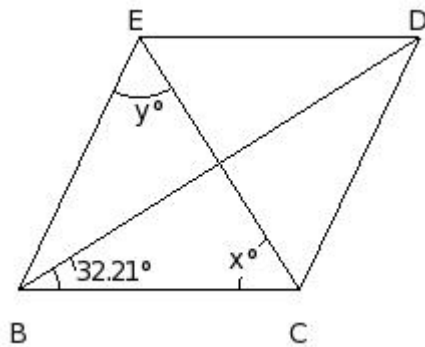
- (i) $x = 62.43^\circ$, $y = 25.57^\circ$
- (ii) $x = 63.43^\circ$, $y = 26.57^\circ$
- (iii) $x = 65.43^\circ$, $y = 28.57^\circ$
- (iv) $x = 64.43^\circ$, $y = 27.57^\circ$
- (v) $x = 61.43^\circ$, $y = 24.57^\circ$

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



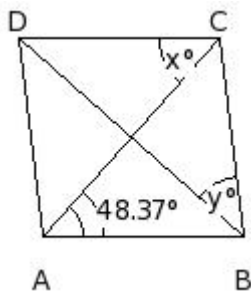
- (i) $x = 18.54^\circ, y = 18.54^\circ$
- (ii) $x = 19.54^\circ, y = 19.54^\circ$
- (iii) $x = 17.54^\circ, y = 17.54^\circ$
- (iv) $x = 20.54^\circ, y = 20.54^\circ$
- (v) $x = 21.54^\circ, y = 21.54^\circ$

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



- (i) $x = 55.79^\circ, y = 55.79^\circ$
- (ii) $x = 56.79^\circ, y = 56.79^\circ$
- (iii) $x = 59.79^\circ, y = 59.79^\circ$
- (iv) $x = 57.79^\circ, y = 57.79^\circ$
- (v) $x = 58.79^\circ, y = 58.79^\circ$

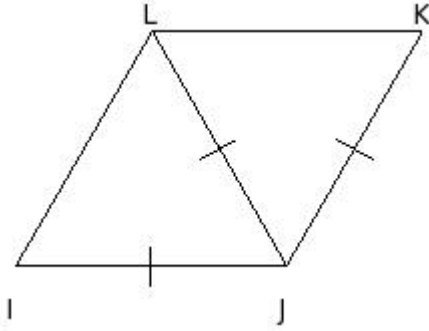
29. In the figure given below, ABCD is a rhombus. Find the values of x and y



- (i) $x = 49.37^\circ, y = 42.63^\circ$
- (ii) $x = 50.37^\circ, y = 43.63^\circ$
- (iii) $x = 48.37^\circ, y = 41.63^\circ$
- (iv) $x = 47.37^\circ, y = 40.63^\circ$

(v) $x = 46.37^\circ$, $y = 39.63^\circ$

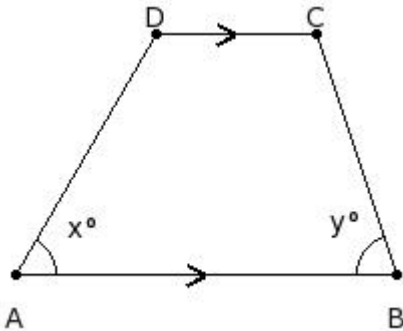
30. One of the diagonals of a rhombus is equal to one of its sides. Find the angles of the rhombus



- (i) $I = 60^\circ$, $J = 120^\circ$, $K = 60^\circ$, $L = 120^\circ$
 (ii) $I = 61^\circ$, $J = 119^\circ$, $K = 62^\circ$, $L = 118^\circ$
 (iii) $I = 59^\circ$, $J = 118^\circ$, $K = 61^\circ$, $L = 122^\circ$
 (iv) $I = 58^\circ$, $J = 122^\circ$, $K = 59^\circ$, $L = 121^\circ$
 (v) $I = 62^\circ$, $J = 119^\circ$, $K = 58^\circ$, $L = 121^\circ$

31. In the adjoining figure, ABCD is a trapezium in which $\overline{AB} \parallel \overline{CD}$.

If $x = 59.74^\circ$ and $y = 71.57^\circ$, find the measures of $\angle C$ and $\angle D$.

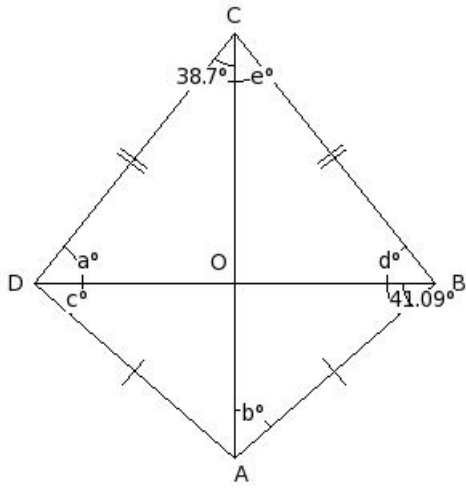


- (i) $C = 110.43^\circ$, $D = 122.26^\circ$
 (ii) $C = 108.43^\circ$, $D = 120.26^\circ$
 (iii) $C = 106.43^\circ$, $D = 118.26^\circ$
 (iv) $C = 107.43^\circ$, $D = 119.26^\circ$
 (v) $C = 109.43^\circ$, $D = 121.26^\circ$

In the adjoining figure, ABCD is a kite in which $AB = DA$, $BC = CD$

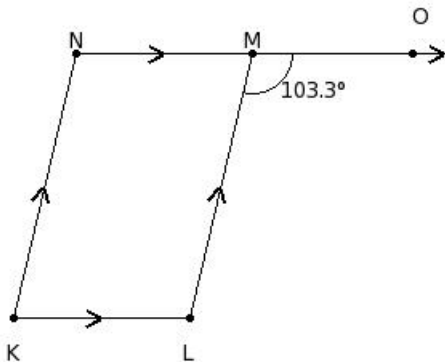
32. and the diagonals $\overline{BD}$ and $\overline{AC}$ intersect at O .

If $\angle OCD = 38.7^\circ$ and $\angle ABO = 41.09^\circ$, find the measure of each of the angles marked a,b,c,d and e.



- (i) $a = 51.3^\circ$, $b = 49.91^\circ$, $c = 40.09^\circ$, $d = 51.3^\circ$, $e = 38.7^\circ$
 (ii) $a = 51.3^\circ$, $b = 49.91^\circ$, $c = 40.09^\circ$, $d = 53.3^\circ$, $e = 38.7^\circ$
 (iii) $a = 51.3^\circ$, $b = 49.91^\circ$, $c = 40.09^\circ$, $d = 53.3^\circ$, $e = 36.7^\circ$
 (iv) $a = 51.3^\circ$, $b = 48.91^\circ$, $c = 41.09^\circ$, $d = 51.3^\circ$, $e = 38.7^\circ$
 (v) $a = 51.3^\circ$, $b = 49.91^\circ$, $c = 41.09^\circ$, $d = 51.3^\circ$, $e = 38.7^\circ$

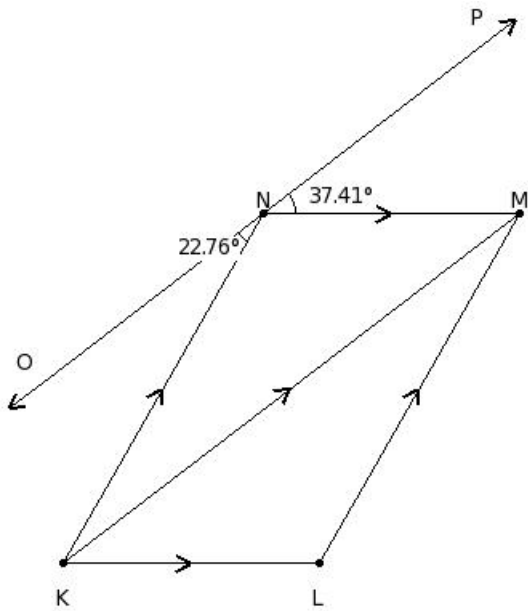
33. In the adjoining figure, side MN of parallelogram KLMN has been produced to O. If $\angle LMO = 103.3^\circ$, find the measure of each angle of the parallelogram.



- (i) $K = 77.7^\circ$, $L = 102.3^\circ$, $M = 78.7^\circ$, $N = 101.3^\circ$
 (ii) $K = 75.7^\circ$, $L = 101.3^\circ$, $M = 77.7^\circ$, $N = 105.3^\circ$
 (iii) $K = 74.7^\circ$, $L = 105.3^\circ$, $M = 75.7^\circ$, $N = 104.3^\circ$
 (iv) $K = 78.7^\circ$, $L = 102.3^\circ$, $M = 74.7^\circ$, $N = 104.3^\circ$
 (v) $K = 76.7^\circ$, $L = 103.3^\circ$, $M = 76.7^\circ$, $N = 103.3^\circ$

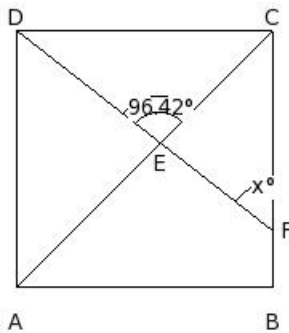
34. In the adjoining figure, KLMN is a parallelogram and OP is such that $\overline{OP} \parallel \overline{KM}$

If $\angle KNO = 22.76^\circ$ and $\angle MNP = 37.41^\circ$, find the measure of $\angle MNK$.



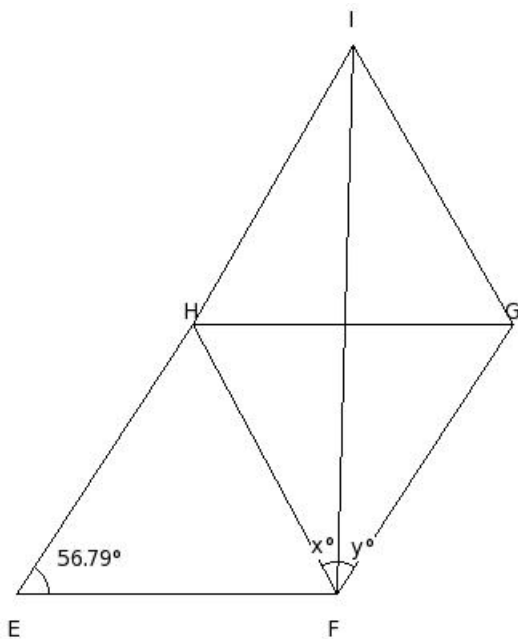
- (i) 118.83° (ii) 121.83° (iii) 119.83° (iv) 117.83° (v) 120.83°

35. In the adjoining figure, ABCD is a square. A line segment DF cuts the side BC at F and the diagonal AC at E such that $\angle DEC = 96.42^\circ$ and $\angle EFC = x^\circ$. Find the value of x .



- (i) 52.42° (ii) 49.42° (iii) 53.42° (iv) 50.42° (v) 51.42°

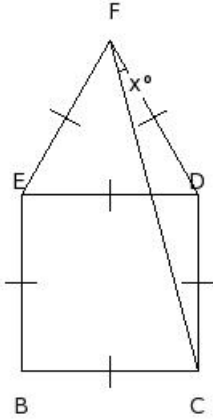
36. In the adjoining figure, EFGH is a rhombus and $\triangle IHG$ is an equilateral triangle. I and F are on opposite sides of GH. If $\angle HEF = 56.79^\circ$, find the values of x and y .



- (i) $x = 30^\circ$, $y = 31.61^\circ$

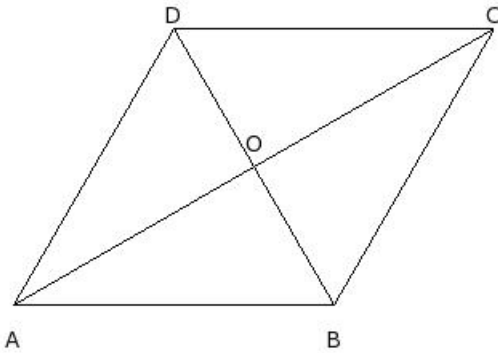
- (ii) $x = 28^\circ$, $y = 29.61^\circ$
- (iii) $x = 32^\circ$, $y = 33.61^\circ$
- (iv) $x = 31^\circ$, $y = 32.61^\circ$
- (v) $x = 29^\circ$, $y = 30.61^\circ$

37. In the adjoining figure, equilateral $\triangle EDF$ surmounts square $BCDE$. If $\angle DFC = x^\circ$, find the value of x .



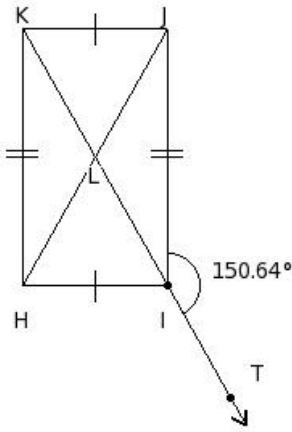
- (i) 15° (ii) 13° (iii) 16° (iv) 17° (v) 14°

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



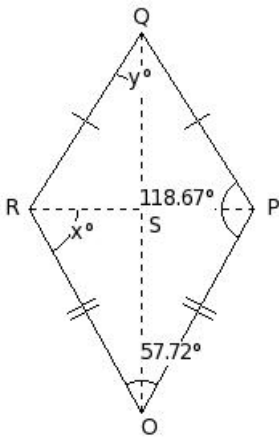
- (i) $O = 88^\circ$, $A = 32^\circ$, $B = 60^\circ$
- (ii) $O = 92^\circ$, $A = 30^\circ$, $B = 58^\circ$
- (iii) $O = 90^\circ$, $A = 28^\circ$, $B = 62^\circ$
- (iv) $O = 88^\circ$, $A = 30^\circ$, $B = 62^\circ$
- (v) $O = 90^\circ$, $A = 30^\circ$, $B = 60^\circ$

39. In the given figure, $HIJK$ is a rectangle whose diagonals intersect at L .
Diagonal IK is produced to T and $\angle JIT = 150.64^\circ$. Find the angles of $\triangle LKH$.



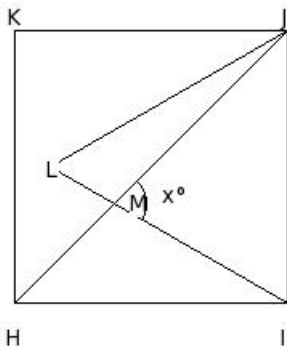
- (i) $L = 121.28^\circ$, $K = 29.36^\circ$, $H = 29.36^\circ$
- (ii) $L = 119.28^\circ$, $K = 29.36^\circ$, $H = 31.36^\circ$
- (iii) $L = 121.28^\circ$, $K = 27.36^\circ$, $H = 31.36^\circ$
- (iv) $L = 123.28^\circ$, $K = 29.36^\circ$, $H = 27.36^\circ$
- (v) $L = 119.28^\circ$, $K = 31.36^\circ$, $H = 29.36^\circ$

40. In the given figure, OPQR is a kite whose diagonals intersect at S .
 If $\angle ROP = 57.72^\circ$ and $\angle OPQ = 118.67^\circ$, calculate $\angle SRO$ and $\angle SQR$.



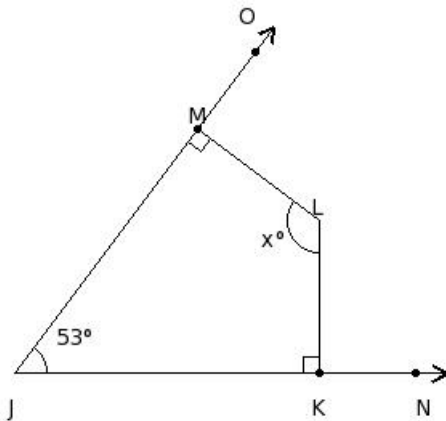
- (i) $x = 61.14^\circ$, $y = 32.47^\circ$
- (ii) $x = 59.14^\circ$, $y = 30.47^\circ$
- (iii) $x = 60.14^\circ$, $y = 31.47^\circ$
- (iv) $x = 63.14^\circ$, $y = 34.47^\circ$
- (v) $x = 62.14^\circ$, $y = 33.47^\circ$

41. $\triangle LIJ$ is an equilateral triangle in a square HIKJ .
 If HJ and LI intersect at M , then find the value of x.



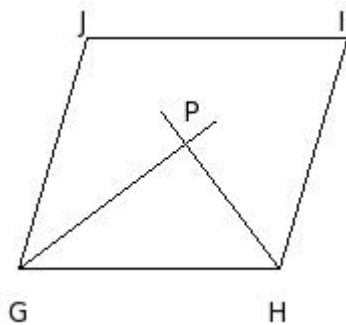
- (i) 76° (ii) 74° (iii) 73° (iv) 75° (v) 77°

42. In the adjoining figure, L is a point in the interior of $\angle NJO$.
If $LK \perp JN$ and $LM \perp JO$ and $\angle NJO = 53^\circ$, find the measure of x.



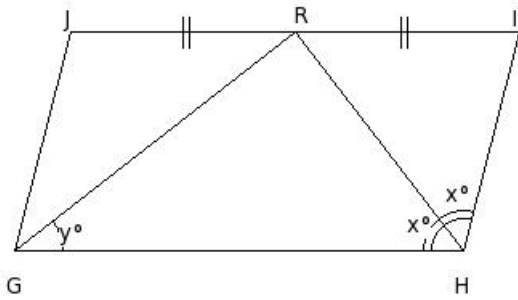
- (i) 126° (ii) 129° (iii) 127° (iv) 128° (v) 125°

43. In the given figure, GHIJ is a parallelogram.
If GP and HP are bisector of $\angle G$ & $\angle H$, find $\angle P$



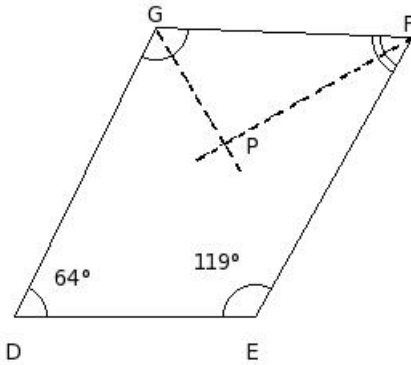
- (i) 90° (ii) 89° (iii) 88° (iv) 92° (v) 91°

44. In the given figure, GHIJ is a parallelogram. R is the mid-point of IJ.
HR bisects $\angle H$. If $x = 52^\circ$, find angle 'y'.



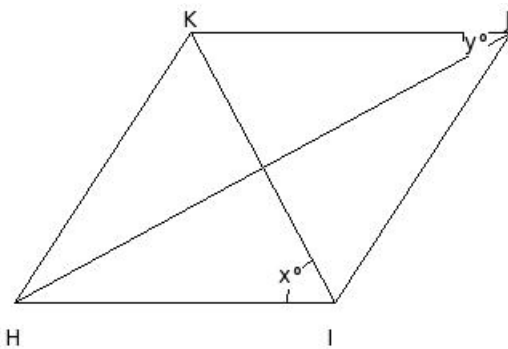
- (i) 36° (ii) 38° (iii) 39° (iv) 37° (v) 40°

45. In the given figure, DEFG is a quadrilateral. PG and PF are bisectors of $\angle G$ & $\angle F$ meeting at P. Find $\angle FPG$



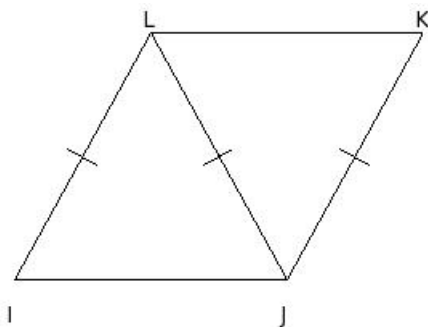
- (i) 93.5° (ii) 92.5° (iii) 91.5° (iv) 90.5° (v) 89.5°

46. In the given figure, HIJK is a rhombus. Given $x = 62^\circ$, find the value of 'y'.



- (i) 28° (ii) 30° (iii) 29° (iv) 26° (v) 27°

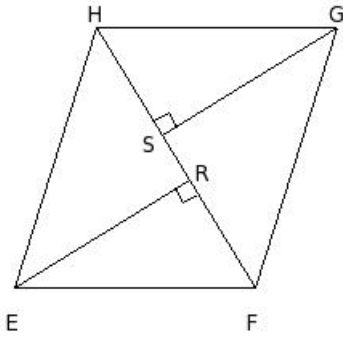
47. In the given figure, IJKL is a parallelogram. JL is the diagonal such that $IL = JL = JK$. Given $\angle I = 61^\circ$, find $\angle LJK$



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

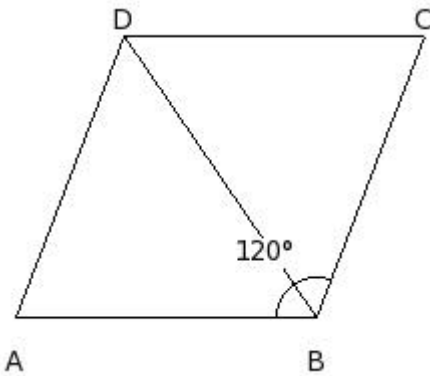
48. In the given figure, EFGH is a parallelogram. ER and GS are perpendicular to the diagonal FH. Given $\angle SGH =$

32° , find $\angle HFE$



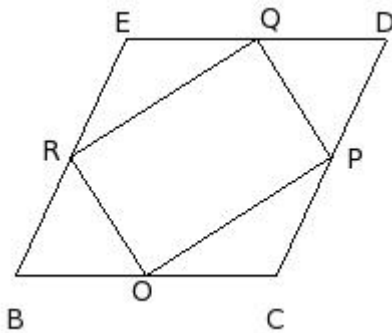
- (i) 60° (ii) 58° (iii) 56° (iv) 59° (v) 57°

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



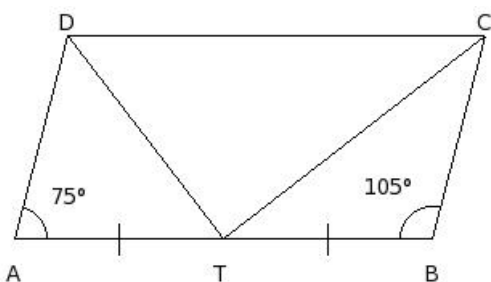
- (i) Equilateral triangle
(ii) Obtuse angled triangle
(iii) Isosceles triangle
(iv) Right angled triangle

50. BCDE is a rhombus. O, P, Q and R are mid-points of sides BC, CD, DE and EB. Find $\angle PQR$



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

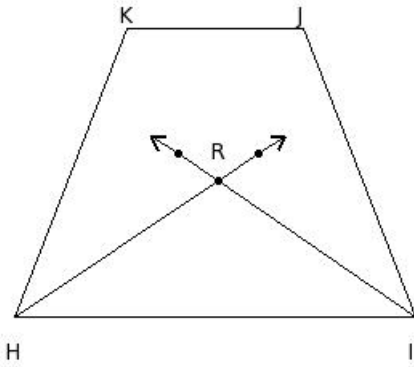
51. In the given figure, ABCD is a parallelogram such that T is the mid-point of AB and $AB = 2DA$. Find $\angle DTC$



- (i) (ii) (iii) (iv) (v)

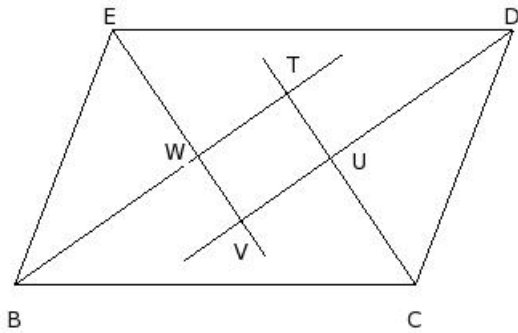
88° 91° 90° 92° 89°

52. HIJK is an isosceles trapezium. HR and IR are angular bisector of $\angle H$ & $\angle I$. If $\angle H = 69^\circ$, find $\angle HRI$



- (i) 113° (ii) 109° (iii) 110° (iv) 112° (v) 111°

53. In the given figure, BCDE is a parallelogram. The bisector of the angles B, C, D & E intersect at T, U, V & W to form a quadrilateral. Find $\angle WTU$



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

Assignment Key

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