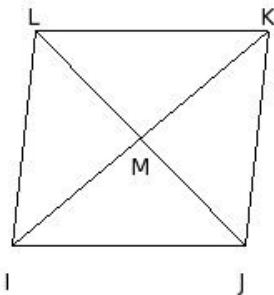




1. The angles of a quadrilateral CDEF are in the ratio 4 : 5 : 6 : 9. Find the measure of each angle of the quadrilateral.
- (i) $C=59^\circ, D=73^\circ, E=91^\circ, F=137^\circ$ (ii) $C=61^\circ, D=74^\circ, E=92^\circ, F=133^\circ$ (iii) $C=60^\circ, D=75^\circ, E=90^\circ, F=135^\circ$
(iv) $C=62^\circ, D=74^\circ, E=88^\circ, F=136^\circ$ (v) $C=58^\circ, D=77^\circ, E=89^\circ, F=136^\circ$

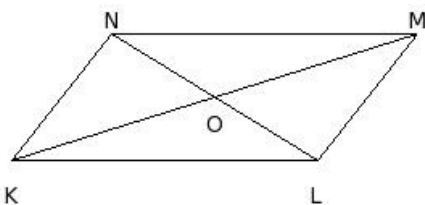
2. Two adjacent angles of a parallelogram GHIJ are in the ratio 6 : 12. Find the measure of each of its angles.
- (i) $G=62^\circ, H=119^\circ, I=58^\circ, J=121^\circ$ (ii) $G=60^\circ, H=120^\circ, I=60^\circ, J=120^\circ$ (iii) $G=59^\circ, H=118^\circ, I=61^\circ, J=122^\circ$
(iv) $G=58^\circ, H=122^\circ, I=59^\circ, J=121^\circ$ (v) $G=61^\circ, H=119^\circ, I=62^\circ, J=118^\circ$

3. In the adjoining figure, IJKL is a parallelogram in which $\angle LIK = 44.07^\circ, \angle KIJ = 39.73^\circ, \angle LMK = 93.94^\circ$. Calculate $\angle IJL$



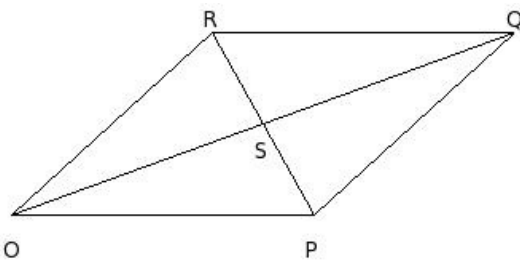
- (i) 45.33° (ii) 48.33° (iii) 46.33° (iv) 44.33° (v) 47.33°

4. In the adjoining figure, KLMN is a parallelogram in which $\angle NKM = 34.32^\circ, \angle MKL = 17.2^\circ, \angle NOM = 131.44^\circ$. Calculate $\angle MNL$



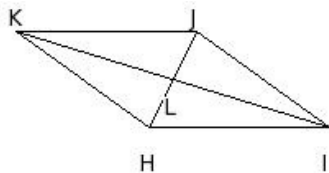
- (i) 30.36° (ii) 29.36° (iii) 33.36° (iv) 31.36° (v) 32.36°

5. In the adjoining figure, OPQR is a parallelogram in which $\angle ROQ = 22.3^\circ, \angle QOP = 19.84^\circ, \angle RSQ = 99.47^\circ$. Calculate $\angle PQO$



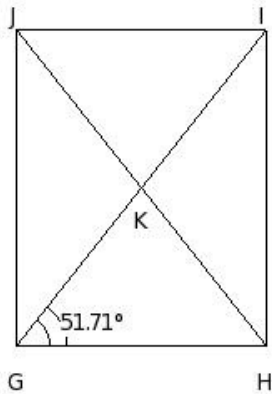
- (i) 20.30° (ii) 24.30° (iii) 21.30° (iv) 22.30° (v) 23.30°

6. In the adjoining figure, HJJK is a parallelogram in which $\angle KHJ = 80.17^\circ$, $\angle JHI = 64.23^\circ$, $\angle KLJ = 100.37^\circ$. Calculate $\angle KIJ$



- (i) 20.20° (ii) 22.20° (iii) 18.20° (iv) 19.20° (v) 21.20°

7. In the adjoining figure, GHJI is a rectangle. If $\angle IGH = 51.71^\circ$, find $\angle JKI$



- (i) 77.58° (ii) 78.58° (iii) 76.58° (iv) 74.58° (v) 75.58°

8. Three angles of quadrilateral measure 81.79° , 134.43° and 81.95° respectively. Find the measure of the fourth angle

- (i) 63.83° (ii) 62.83° (iii) 59.83° (iv) 60.83° (v) 61.83°

9. Three angles of a quadrilateral are equal and the fourth angle measure 75.34° . What is the measure of each of the equal angles?

- (i) 96.89° (ii) 92.89° (iii) 94.89° (iv) 95.89° (v) 93.89°

10. Two angles of a quadrilateral are of measure 48.37° and 146.34° respectively and the other two angles are equal. Find the measure of each of the equal angles.

- (i) 80.64° (ii) 83.64° (iii) 82.64° (iv) 84.64° (v) 81.64°

11. A quadrilateral has three acute angles, each measuring 77° . What is the measure of its fourth angle?

- (i) 131.00° (ii) 130.00° (iii) 128.00° (iv) 127.00° (v) 129.00°

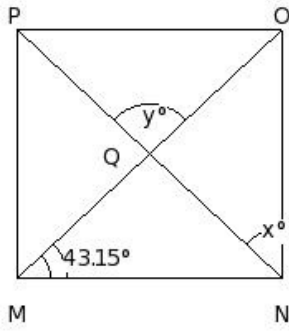
12. One angle of a parallelogram measures $N = 74.85^\circ$. Find the measure of each of its remaining angles.

- (i) $O = 104.15^\circ, P = 73.85^\circ, Q = 104.15^\circ$ (ii) $O = 107.15^\circ, P = 76.85^\circ, Q = 107.15^\circ$
 (iii) $O = 105.15^\circ, P = 74.85^\circ, Q = 105.15^\circ$ (iv) $O = 106.15^\circ, P = 75.85^\circ, Q = 106.15^\circ$
 (v) $O = 103.15^\circ, P = 72.85^\circ, Q = 103.15^\circ$

13. Two adjacent angles of a parallelogram are in the ratio 4 : 16. Find the measure of each of its angles.

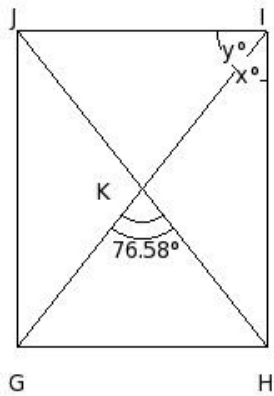
- (i) $A = 36^\circ, B = 144^\circ, C = 36^\circ, D = 144^\circ$ (ii) $A = 37^\circ, B = 143^\circ, C = 38^\circ, D = 142^\circ$
 (iii) $A = 38^\circ, B = 143^\circ, C = 34^\circ, D = 145^\circ$ (iv) $A = 34^\circ, B = 146^\circ, C = 35^\circ, D = 145^\circ$
 (v) $A = 35^\circ, B = 142^\circ, C = 37^\circ, D = 146^\circ$

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



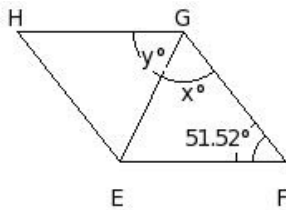
- (i) $x=47.85^\circ, y=94.7^\circ$ (ii) $x=44.85^\circ, y=91.7^\circ$ (iii) $x=48.85^\circ, y=95.7^\circ$ (iv) $x=46.85^\circ, y=93.7^\circ$
 (v) $x=45.85^\circ, y=92.7^\circ$

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



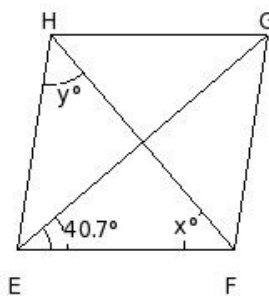
- (i) $x=37.29^\circ, y=50.71^\circ$ (ii) $x=38.29^\circ, y=51.71^\circ$ (iii) $x=36.29^\circ, y=49.71^\circ$ (iv) $x=39.29^\circ, y=52.71^\circ$
 (v) $x=40.29^\circ, y=53.71^\circ$

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



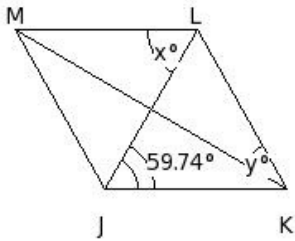
- (i) $x=66.24^\circ, y=66.24^\circ$ (ii) $x=64.24^\circ, y=64.24^\circ$ (iii) $x=63.24^\circ, y=63.24^\circ$ (iv) $x=65.24^\circ, y=65.24^\circ$
 (v) $x=62.24^\circ, y=62.24^\circ$

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



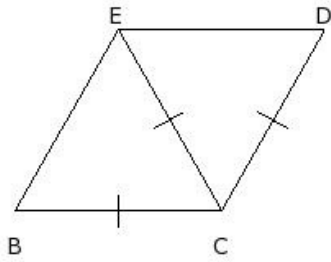
- (i) $x=50.3^\circ, y=50.3^\circ$ (ii) $x=51.3^\circ, y=51.3^\circ$ (iii) $x=47.3^\circ, y=47.3^\circ$ (iv) $x=49.3^\circ, y=49.3^\circ$
 (v) $x=48.3^\circ, y=48.3^\circ$

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



- (i) $x=57.74^\circ, y=28.26^\circ$ (ii) $x=60.74^\circ, y=31.26^\circ$ (iii) $x=59.74^\circ, y=30.26^\circ$ (iv) $x=61.74^\circ, y=32.26^\circ$
 (v) $x=58.74^\circ, y=29.26^\circ$

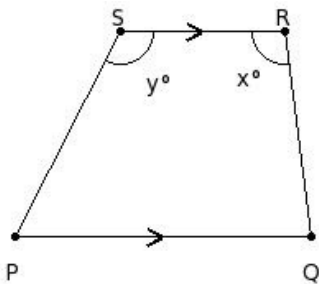
19. One of the diagonals of a rhombus is equal to one of its sides. Find the angles of the rhombus



- (i) $B=61^\circ, C=119^\circ, D=62^\circ, E=118^\circ$ (ii) $B=60^\circ, C=120^\circ, D=60^\circ, E=120^\circ$
 (iii) $B=59^\circ, C=118^\circ, D=61^\circ, E=122^\circ$ (iv) $B=58^\circ, C=122^\circ, D=59^\circ, E=121^\circ$
 (v) $B=62^\circ, C=119^\circ, D=58^\circ, E=121^\circ$

20. In the adjoining figure, PQRS is a trapezium in which $\overline{PQ} \parallel \overline{RS}$.

If $x = 97.29^\circ$ and $y = 117.11^\circ$, find the measures of $\angle P$ and $\angle Q$.

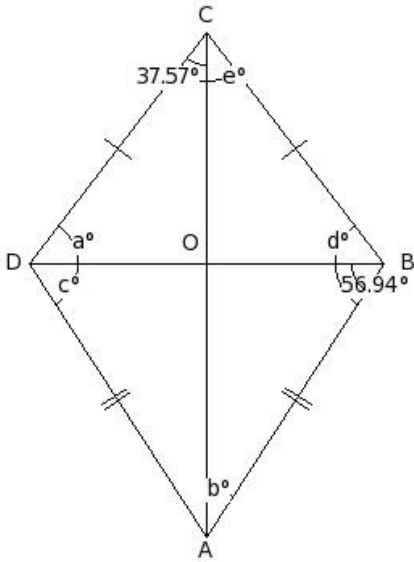


- (i) $P=64.89^\circ, Q=84.71^\circ$ (ii) $P=61.89^\circ, Q=81.71^\circ$ (iii) $P=62.89^\circ, Q=82.71^\circ$ (iv) $P=63.89^\circ, Q=83.71^\circ$
 (v) $P=60.89^\circ, Q=80.71^\circ$

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

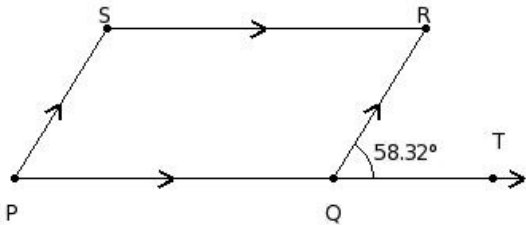
21. and the diagonals \overline{BD} and \overline{AC} intersect at O.

If $\angle OCD = 37.57^\circ$ and $\angle ABO = 56.94^\circ$, find the measure of each of the angles marked a, b, c, d and e.



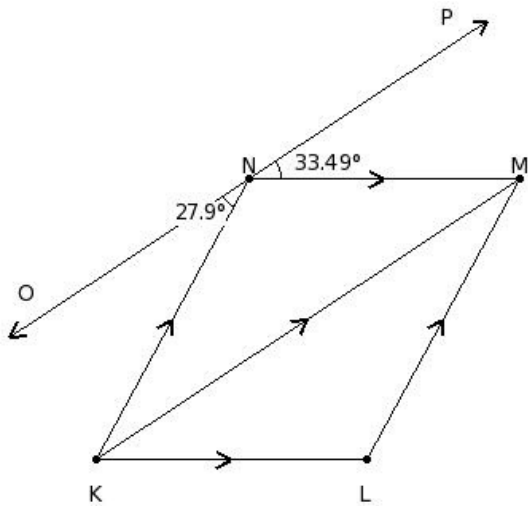
- (i) $a = 52.43^\circ$, $b = 34.06^\circ$, $c = 56.94^\circ$, $d = 52.43^\circ$, $e = 37.57^\circ$
- (ii) $a = 52.43^\circ$, $b = 33.06^\circ$, $c = 56.94^\circ$, $d = 52.43^\circ$, $e = 37.57^\circ$
- (iii) $a = 52.43^\circ$, $b = 34.06^\circ$, $c = 55.94^\circ$, $d = 52.43^\circ$, $e = 37.57^\circ$
- (iv) $a = 52.43^\circ$, $b = 34.06^\circ$, $c = 55.94^\circ$, $d = 54.43^\circ$, $e = 37.57^\circ$
- (v) $a = 52.43^\circ$, $b = 34.06^\circ$, $c = 55.94^\circ$, $d = 54.43^\circ$, $e = 35.57^\circ$

22. In the adjoining figure, side PQ of parallelogram PQRS has been produced to T. If $\angle RQT = 58.32^\circ$, find the measure of each angle of the parallelogram.



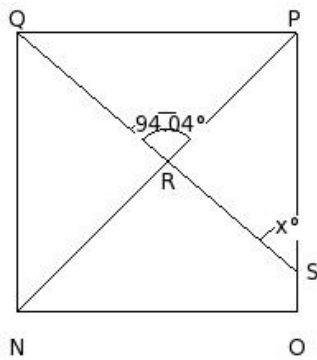
- (i) $P=59.32^\circ, Q=120.68^\circ, R=60.32^\circ, S=119.68^\circ$
- (ii) $P=60.32^\circ, Q=120.68^\circ, R=56.32^\circ, S=122.68^\circ$
- (iii) $P=58.32^\circ, Q=121.68^\circ, R=58.32^\circ, S=121.68^\circ$
- (iv) $P=57.32^\circ, Q=119.68^\circ, R=59.32^\circ, S=123.68^\circ$
- (v) $P=56.32^\circ, Q=123.68^\circ, R=57.32^\circ, S=122.68^\circ$

23. In the adjoining figure, KLMN is a parallelogram and OP is such that $\overline{OP} \parallel \overline{KM}$. If $\angle KNO = 27.9^\circ$ and $\angle MNP = 33.49^\circ$, find the measure of $\angle MNK$.



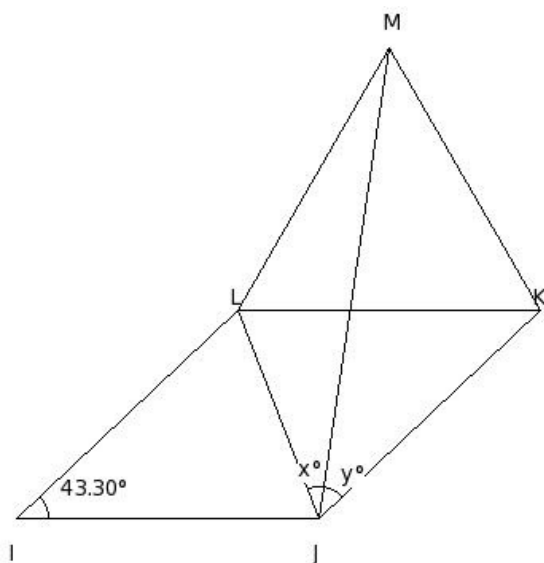
- (i) 120.61° (ii) 118.61° (iii) 117.61° (iv) 119.61° (v) 116.61°

24. In the adjoining figure, NOPQ is a square. A line segment QS cuts the side OP at S and the diagonal NP at R such that $\angle QRP = 94.04^\circ$ and $\angle RSP = x^\circ$. Find the value of x .



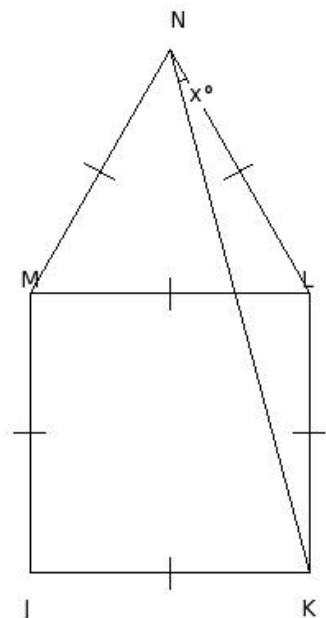
- (i) 50.04° (ii) 49.04° (iii) 48.04° (iv) 47.04° (v) 51.04°

25. In the adjoining figure, IJKL is a rhombus and $\triangle MLK$ is an equilateral triangle. M and J are on opposite sides of KL. If $\angle LIJ = 43.3^\circ$, find the values of x and y .



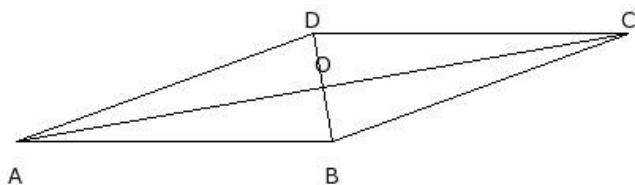
- (i) $x=32^\circ, y=40.35^\circ$ (ii) $x=30^\circ, y=38.35^\circ$ (iii) $x=29^\circ, y=37.35^\circ$ (iv) $x=28^\circ, y=36.35^\circ$
 (v) $x=31^\circ, y=39.35^\circ$

26. In the adjoining figure, equilateral $\triangle MLN$ surmounts square JKLM. If $\angle LNK = x^\circ$, find the value of x .



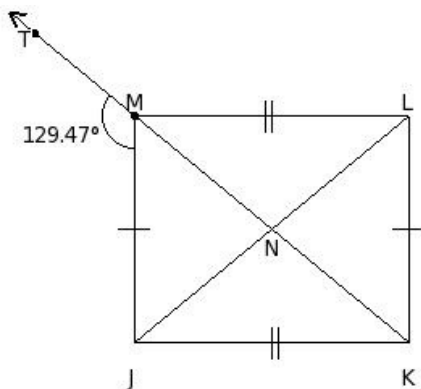
- (i) 14° (ii) 16° (iii) 13° (iv) 15° (v) 17°

27. In the adjoining figure, ABCD is a rhombus whose diagonals intersect at O. If $\angle OAB : \angle ABO = 2 : 16$, find the angles of $\triangle OAB$.



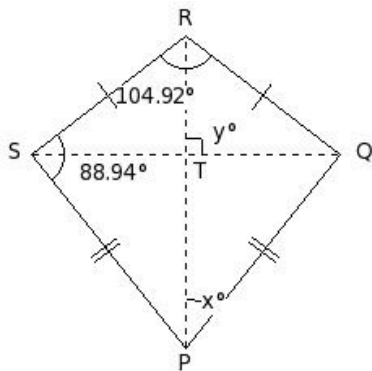
- (i) $O = 92^\circ, A = 10^\circ, B = 78^\circ$ (ii) $O = 90^\circ, A = 10^\circ, B = 80^\circ$ (iii) $O = 88^\circ, A = 12^\circ, B = 80^\circ$ (iv) $O = 90^\circ, A = 8^\circ, B = 82^\circ$
 (v) $O = 88^\circ, A = 10^\circ, B = 82^\circ$

28. In the given figure, JKLM is a rectangle whose diagonals intersect at N. Diagonal KM is produced to T and $\angle JMT = 129.47^\circ$. Find the angles of $\triangle NKL$.



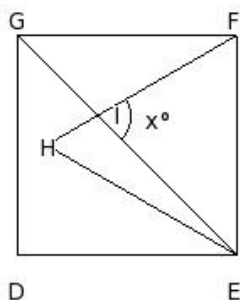
- (i) $N = 80.94^\circ, K = 50.53^\circ, L = 48.53^\circ$ (ii) $N = 78.94^\circ, K = 50.53^\circ, L = 50.53^\circ$ (iii) $N = 76.94^\circ, K = 50.53^\circ, L = 52.53^\circ$
 (iv) $N = 76.94^\circ, K = 52.53^\circ, L = 50.53^\circ$ (v) $N = 78.94^\circ, K = 48.53^\circ, L = 52.53^\circ$

29. In the given figure, PQRS is a kite whose diagonals intersect at T. If $\angle QRS = 104.92^\circ$ and $\angle RSP = 88.94^\circ$, calculate $\angle TPQ$ and $\angle RTQ$.



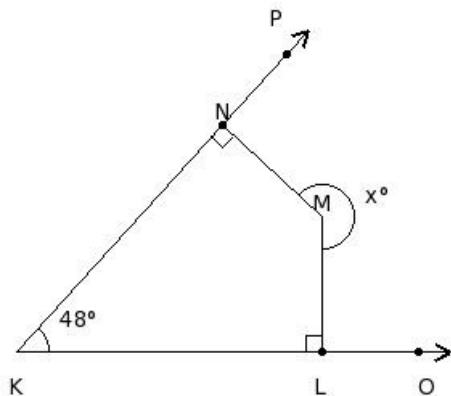
- (i) $x=39.6^\circ, y=91^\circ$ (ii) $x=36.6^\circ, y=88^\circ$ (iii) $x=37.6^\circ, y=89^\circ$ (iv) $x=38.6^\circ, y=90^\circ$ (v) $x=40.6^\circ, y=92^\circ$

30. $\triangle HEF$ is an equilateral triangle in a square DEFG. If EG and FH intersect at I, then find the value of x.



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

31. In the adjoining figure, M is a point in the interior of $\angle OKP$. If $ML \perp KO$ and $MN \perp KP$ and $\angle OKP = 48^\circ$, find the measure of x.



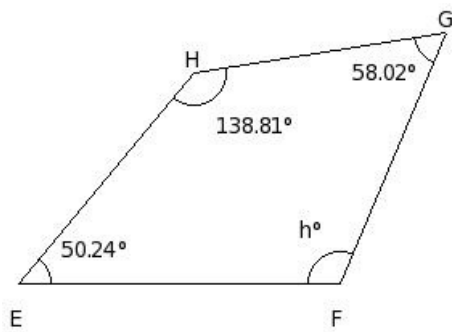
- (i) 228° (ii) 227° (iii) 229° (iv) 230° (v) 226°

32. The measures of three angles of a quadrilateral are 51.32° , 131.67° and 54.31° . Find the fourth angle
 (i) 132.7° (ii) 152.7° (iii) 127.7° (iv) 122.7° (v) 137.7°

33. Sum of the interior angles in a quadrilateral is
 (i) 375° (ii) 370° (iii) 360° (iv) 365° (v) 390°

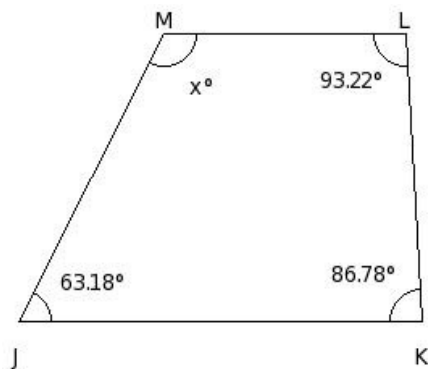
34. How many diagonals does a quadrilateral have?
 (i) 4 (ii) 3 (iii) 0 (iv) 1 (v) 2

35. Find the missing angle in the given quadrilateral



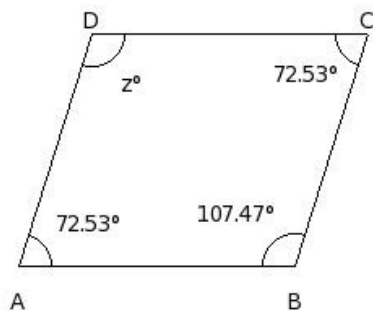
- (i) 112.93° (ii) 142.93° (iii) 117.93° (iv) 127.93° (v) 122.93°

36. Find the missing angle in the given trapezium



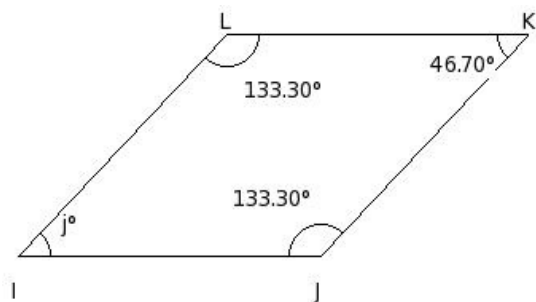
- (i) 131.82° (ii) 116.82° (iii) 126.82° (iv) 146.82° (v) 121.82°

37. Find the missing angle in the given parallelogram



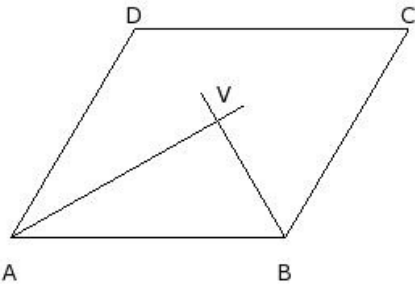
- (i) 107.47° (ii) 137.47° (iii) 112.47° (iv) 122.47° (v) 117.47°

38. Find the missing angle in the given rhombus



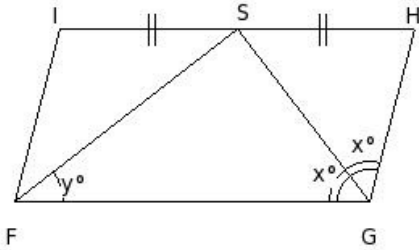
- (i) 76.7° (ii) 61.7° (iii) 51.7° (iv) 46.7° (v) 56.7°

39. In the given figure, ABCD is a parallelogram. If AV and BV are bisector of $\angle A$ & $\angle B$, find $\angle V$



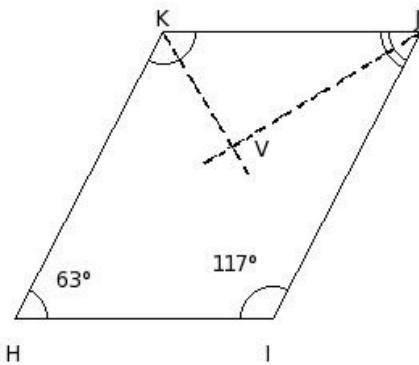
- (i) 91° (ii) 92° (iii) 88° (iv) 89° (v) 90°

40. In the given figure, FGHI is a parallelogram. S is the mid-point of HI. GS bisects $\angle G$. If $x = 53^\circ$, find angle 'y'.



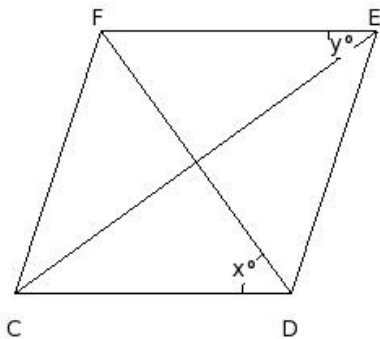
- (i) 35° (ii) 39° (iii) 36° (iv) 37° (v) 38°

41. In the given figure, HIJK is a quadrilateral. VK and VJ are bisectors of $\angle K$ & $\angle J$ meeting at V. Find $\angle JVK$



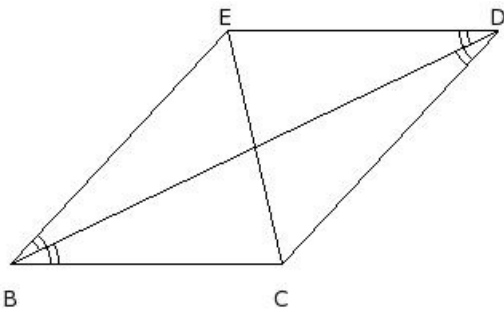
- (i) 90.0° (ii) 91.0° (iii) 89.0° (iv) 92.0° (v) 88.0°

42. In the given figure, CDEF is a rhombus. Given $x = 54^\circ$, find the value of 'y'.



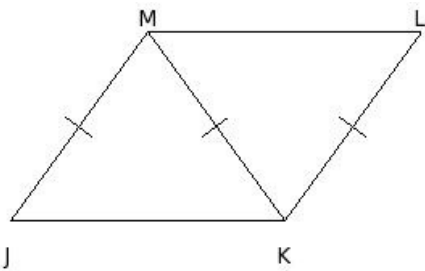
- (i) 36° (ii) 34° (iii) 37° (iv) 38° (v) 35°

43. In the given figure, BCDE is a parallelogram. BD bisects $\angle B$ & $\angle D$.
Given $BD = 12$ cm and $CE = 8$ cm, find BC



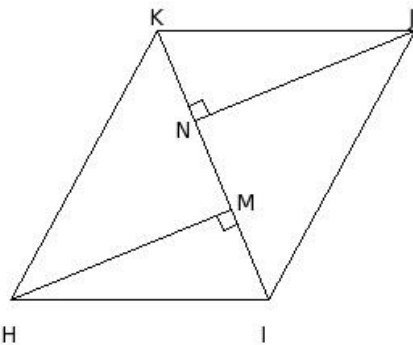
- (i) 9.21 cm (ii) 7.21 cm (iii) 8.21 cm (iv) 6.21 cm (v) 5.21 cm

44. In the given figure, JKLM is a parallelogram. KM is the diagonal such that $JM = KM = KL$. Given $\angle J = 54^\circ$, find $\angle MKL$



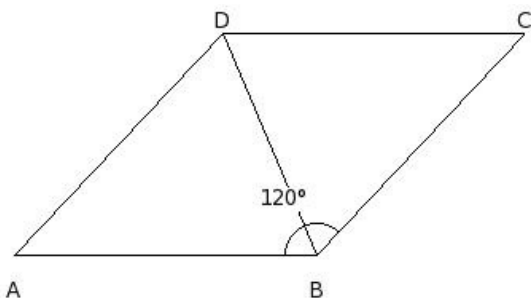
- (i) 71° (ii) 72° (iii) 74° (iv) 70° (v) 73°

45. In the given figure, HIJK is a parallelogram. HM and JN are perpendicular to the diagonal IK. Given $\angle MHI = 22^\circ$, find $\angle JKI$



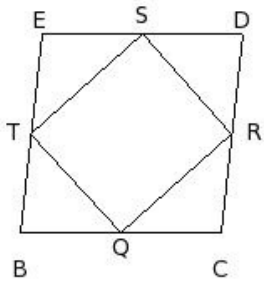
- (i) 70° (ii) 66° (iii) 67° (iv) 68° (v) 69°

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



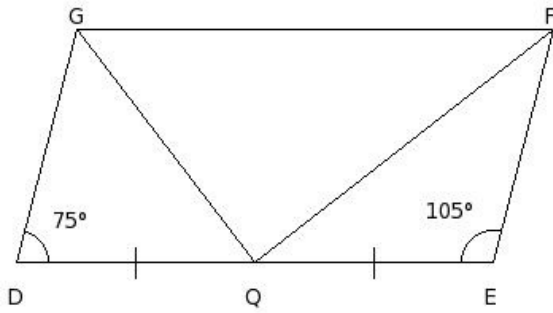
- (i) Equilateral triangle (ii) Right angled triangle (iii) Obtuse angled triangle (iv) Isosceles triangle

47. BCDE is a rhombus. Q, R, S and T are mid-points of sides BC, CD, DE and EB. Find $\angle RST$



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

48. In the given figure, DEFG is a parallelogram such that Q is the mid-point of DE and $DE = 2GD$. Find $\angle GQF$



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

Assignment Key

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