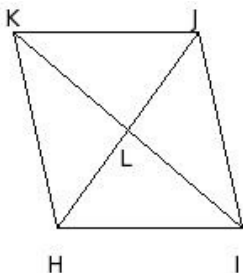


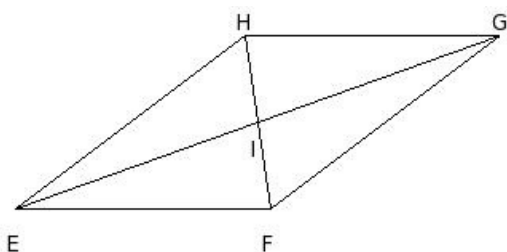


- In parallelogram ABCD, if $\angle D = 143.04^\circ$, then find the value of $\angle B$
(i) 141.04° (ii) 145.04° (iii) 143.04° (iv) 144.04° (v) 142.04°
- If the opposite angles of a parallelogram are supplementary, the measure of each of its angles is
(i) 88° (ii) 89° (iii) 92° (iv) 90° (v) 91°
- The sum of the interior angles of a quadrilateral is
(i) 270° (ii) 360° (iii) 90° (iv) 180°
- The angles of a quadrilateral MNOP are in the ratio 1 : 2 : 3 : 6. Find the measure of each angle of the quadrilateral.
(i) $M=30^\circ, N=60^\circ, O=90^\circ, P=180^\circ$ (ii) $M=31^\circ, N=59^\circ, O=92^\circ, P=178^\circ$ (iii) $M=29^\circ, N=58^\circ, O=91^\circ, P=182^\circ$
(iv) $M=32^\circ, N=59^\circ, O=88^\circ, P=181^\circ$ (v) $M=28^\circ, N=62^\circ, O=89^\circ, P=181^\circ$
- Two adjacent angles of a parallelogram LMNO are in the ratio 5 : 13. Find the measure of each of its angles.
(i) $L=50^\circ, M=130^\circ, N=50^\circ, O=130^\circ$ (ii) $L=52^\circ, M=129^\circ, N=48^\circ, O=131^\circ$
(iii) $L=49^\circ, M=128^\circ, N=51^\circ, O=132^\circ$ (iv) $L=48^\circ, M=132^\circ, N=49^\circ, O=131^\circ$
(v) $L=51^\circ, M=129^\circ, N=52^\circ, O=128^\circ$

6. In the adjoining figure, HIJK is a parallelogram in which $\angle KHJ = 48.54^\circ$, $\angle JHI = 54.09^\circ$, $\angle KLJ = 85.45^\circ$. Calculate $\angle HIK$

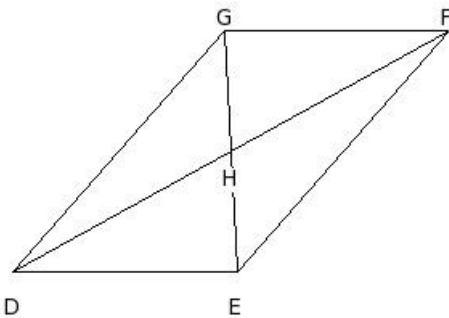


- (i) 38.46° (ii) 39.46° (iii) 41.46° (iv) 40.46° (v) 42.46°
7. In the adjoining figure, EFGH is a parallelogram in which $\angle HEG = 17.31^\circ$, $\angle GEF = 19.56^\circ$, $\angle HIG = 78.87^\circ$. Calculate $\angle GHF$



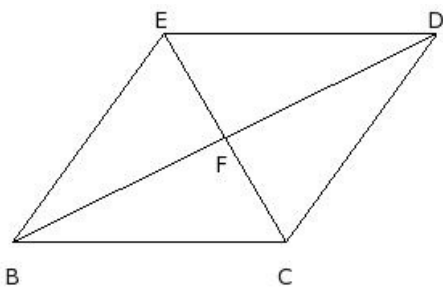
- (i) 81.57° (ii) 83.57° (iii) 79.57° (iv) 82.57° (v) 80.57°

8. In the adjoining figure, DEFG is a parallelogram in which $\angle GDF = 19.78^\circ$, $\angle FDE = 28.88^\circ$, $\angle GHF = 64.17^\circ$. Calculate $\angle EFD$



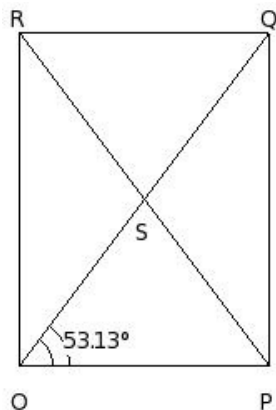
- (i) 18.78° (ii) 21.78° (iii) 20.78° (iv) 17.78° (v) 19.78°

9. In the adjoining figure, BCDE is a parallelogram in which $\angle EBD = 27.92^\circ$, $\angle DBC = 26.22^\circ$, $\angle EFD = 94.09^\circ$. Calculate $\angle ECD$



- (i) 64.18° (ii) 68.18° (iii) 65.18° (iv) 67.18° (v) 66.18°

10. In the adjoining figure, OPQR is a rectangle. If $\angle QOP = 53.13^\circ$, find $\angle OPR$



- (i) 52.13° (ii) 55.13° (iii) 53.13° (iv) 54.13° (v) 51.13°

11. Three angles of quadrilateral measure 87.5° , 109.61° and 79.42° respectively. Find the measure of the fourth angle

- (i) 82.47° (ii) 84.47° (iii) 81.47° (iv) 85.47° (v) 83.47°

12. Three angles of a quadrilateral are equal and the fourth angle measure 67.98° . What is the measure of each of the equal angles?

- (i) 95.34° (ii) 96.34° (iii) 99.34° (iv) 98.34° (v) 97.34°

13. Two angles of a quadrilateral are of measure 50.48° and 107.42° respectively and the other two angles are equal. Find the measure of each of the equal angles.

- (i) 101.05° (ii) 99.05° (iii) 102.05° (iv) 103.05° (v) 100.05°

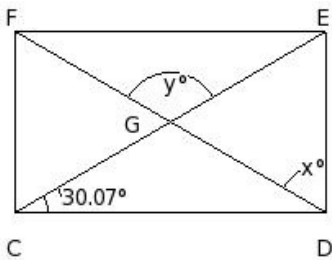
14. A quadrilateral has three acute angles, each measuring 43° . What is the measure of its fourth angle?

- (i) 233.00° (ii) 232.00° (iii) 229.00° (iv) 230.00° (v) 231.00°

15. One angle of a parallelogram measures $G = 59.49^\circ$. Find the measure of each of its remaining angles.
- (i) $H = 122.51^\circ, I = 61.49^\circ, J = 122.51^\circ$ (ii) $H = 119.51^\circ, I = 58.49^\circ, J = 119.51^\circ$
- (iii) $H = 118.51^\circ, I = 57.49^\circ, J = 118.51^\circ$ (iv) $H = 120.51^\circ, I = 59.49^\circ, J = 120.51^\circ$
- (v) $H = 121.51^\circ, I = 60.49^\circ, J = 121.51^\circ$

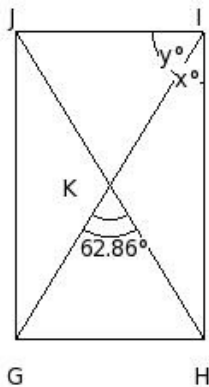
16. Two adjacent angles of a parallelogram are in the ratio 26 : 34. Find the measure of each of its angles.
- (i) $A = 77^\circ, B = 100^\circ, C = 79^\circ, D = 104^\circ$ (ii) $A = 80^\circ, B = 101^\circ, C = 76^\circ, D = 103^\circ$
- (iii) $A = 78^\circ, B = 102^\circ, C = 78^\circ, D = 102^\circ$ (iv) $A = 79^\circ, B = 101^\circ, C = 80^\circ, D = 100^\circ$
- (v) $A = 76^\circ, B = 104^\circ, C = 77^\circ, D = 103^\circ$

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



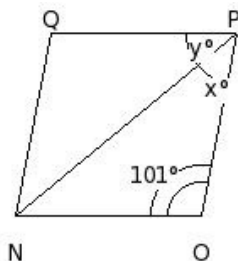
- (i) $x = 57.93^\circ, y = 117.86^\circ$ (ii) $x = 59.93^\circ, y = 119.86^\circ$ (iii) $x = 61.93^\circ, y = 121.86^\circ$ (iv) $x = 58.93^\circ, y = 118.86^\circ$
- (v) $x = 60.93^\circ, y = 120.86^\circ$

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



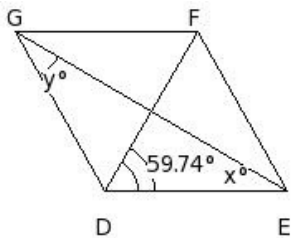
- (i) $x = 30.43^\circ, y = 57.57^\circ$ (ii) $x = 31.43^\circ, y = 58.57^\circ$ (iii) $x = 29.43^\circ, y = 56.57^\circ$ (iv) $x = 33.43^\circ, y = 60.57^\circ$
- (v) $x = 32.43^\circ, y = 59.57^\circ$

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



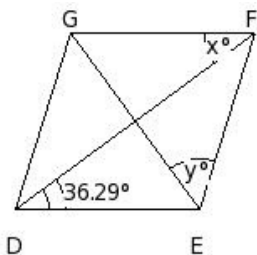
- (i) $x = 38.5^\circ, y = 38.5^\circ$ (ii) $x = 39.5^\circ, y = 39.5^\circ$ (iii) $x = 41.5^\circ, y = 41.5^\circ$ (iv) $x = 37.5^\circ, y = 37.5^\circ$
- (v) $x = 40.5^\circ, y = 40.5^\circ$

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



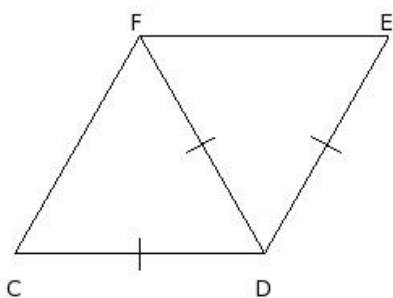
- (i) $x=30.26^\circ, y=30.26^\circ$ (ii) $x=32.26^\circ, y=32.26^\circ$ (iii) $x=28.26^\circ, y=28.26^\circ$ (iv) $x=31.26^\circ, y=31.26^\circ$
 (v) $x=29.26^\circ, y=29.26^\circ$

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



- (i) $x=36.29^\circ, y=53.71^\circ$ (ii) $x=37.29^\circ, y=54.71^\circ$ (iii) $x=34.29^\circ, y=51.71^\circ$ (iv) $x=38.29^\circ, y=55.71^\circ$
 (v) $x=35.29^\circ, y=52.71^\circ$

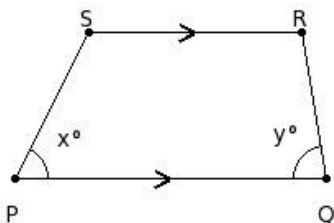
22. One of the diagonals of a rhombus is equal to one of its sides. Find the angles of the rhombus



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

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

If $x = 63.18^\circ$ and $y = 80.43^\circ$, find the measures of $\angle R$ and $\angle S$.

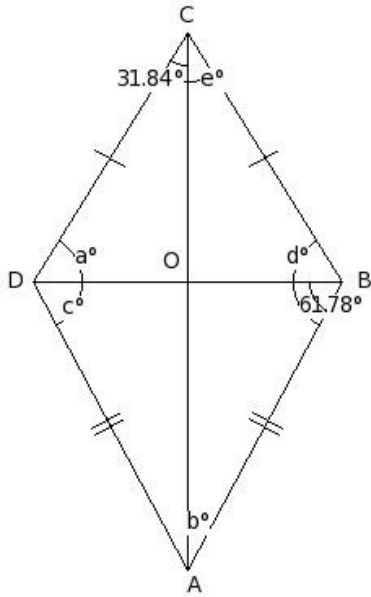


- (i) $R=97.57^\circ, S=114.82^\circ$ (ii) $R=98.57^\circ, S=115.82^\circ$ (iii) $R=101.57^\circ, S=118.82^\circ$
 (iv) $R=100.57^\circ, S=117.82^\circ$ (v) $R=99.57^\circ, S=116.82^\circ$

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

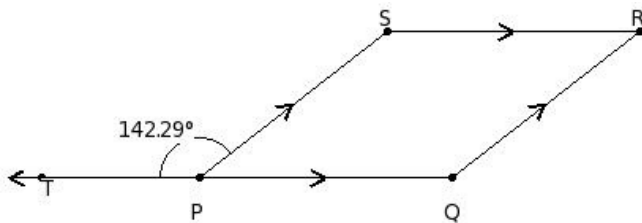
24. and the diagonals \overline{BD} and \overline{AC} intersect at O.

If $\angle OCD = 31.84^\circ$ and $\angle ABO = 61.78^\circ$, find the measure of each of the angles marked a, b, c, d and e.



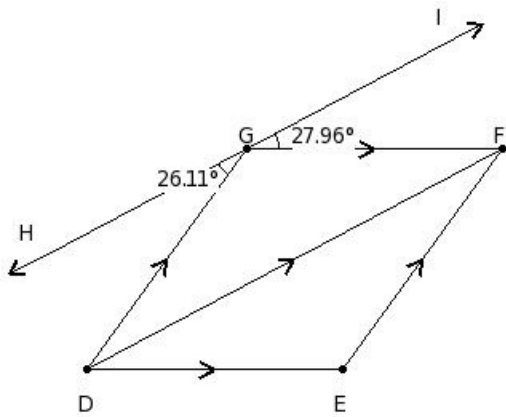
- (i) $a = 58.16^\circ$, $b = 29.22^\circ$, $c = 60.78^\circ$, $d = 60.16^\circ$, $e = 31.84^\circ$
- (ii) $a = 58.16^\circ$, $b = 29.22^\circ$, $c = 60.78^\circ$, $d = 58.16^\circ$, $e = 31.84^\circ$
- (iii) $a = 58.16^\circ$, $b = 29.22^\circ$, $c = 61.78^\circ$, $d = 58.16^\circ$, $e = 31.84^\circ$
- (iv) $a = 58.16^\circ$, $b = 28.22^\circ$, $c = 61.78^\circ$, $d = 58.16^\circ$, $e = 31.84^\circ$
- (v) $a = 58.16^\circ$, $b = 29.22^\circ$, $c = 60.78^\circ$, $d = 60.16^\circ$, $e = 29.84^\circ$

25. In the adjoining figure, side PQ of parallelogram PQRS has been produced to T. If $\angle SPT = 142.29^\circ$, find the measure of each angle of the parallelogram.



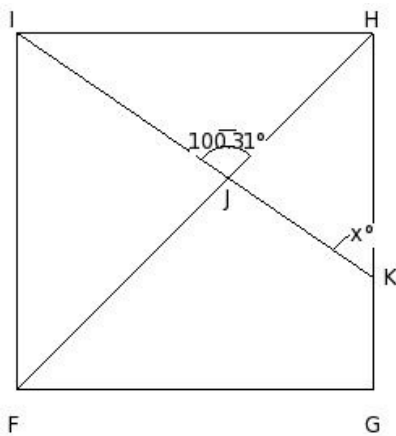
- (i) $P=38.71^\circ$, $Q=141.29^\circ$, $R=39.71^\circ$, $S=140.29^\circ$
- (ii) $P=37.71^\circ$, $Q=142.29^\circ$, $R=37.71^\circ$, $S=142.29^\circ$
- (iii) $P=39.71^\circ$, $Q=141.29^\circ$, $R=35.71^\circ$, $S=143.29^\circ$
- (iv) $P=35.71^\circ$, $Q=144.29^\circ$, $R=36.71^\circ$, $S=143.29^\circ$
- (v) $P=36.71^\circ$, $Q=140.29^\circ$, $R=38.71^\circ$, $S=144.29^\circ$

26. In the adjoining figure, DEFG is a parallelogram and HI is such that $\overline{HI} \parallel \overline{DF}$. If $\angle DGH = 26.11^\circ$ and $\angle FGI = 27.96^\circ$, find the measure of $\angle FGD$.



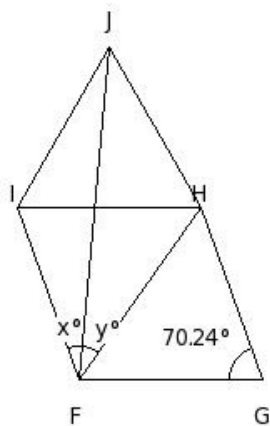
- (i) 123.93° (ii) 126.93° (iii) 127.93° (iv) 125.93° (v) 124.93°

27. In the adjoining figure, FGHI is a square. A line segment IK cuts the side GH at K and the diagonal FH at J such that $\angle IJH = 100.31^\circ$ and $\angle JKH = x^\circ$. Find the value of x .



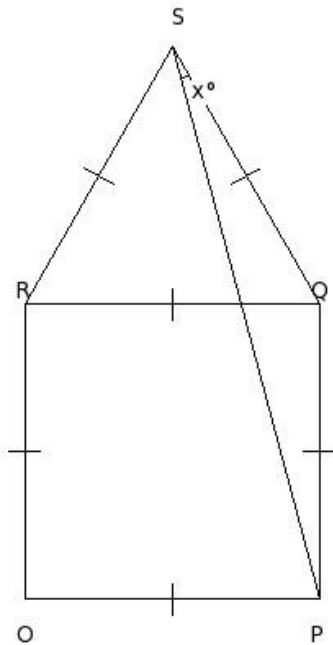
- (i) 53.31° (ii) 54.31° (iii) 56.31° (iv) 57.31° (v) 55.31°

28. In the adjoining figure, FGHI is a rhombus and $\triangle JIH$ is an equilateral triangle. J and F are on opposite sides of HI. If $\angle FGH = 70.24^\circ$, find the values of x and y .



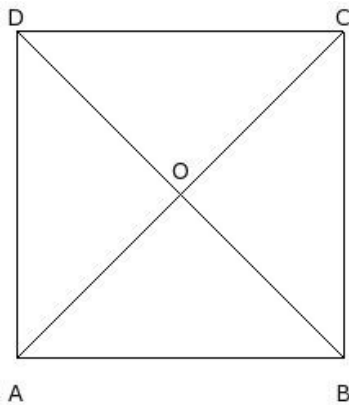
- (i) $x=25.88^\circ, y=31^\circ$ (ii) $x=24.88^\circ, y=30^\circ$ (iii) $x=26.88^\circ, y=32^\circ$ (iv) $x=22.88^\circ, y=28^\circ$
 (v) $x=23.88^\circ, y=29^\circ$

29. In the adjoining figure, equilateral $\triangle RQS$ surmounts square $OPQR$. If $\angle QSP = x^\circ$, find the value of x .



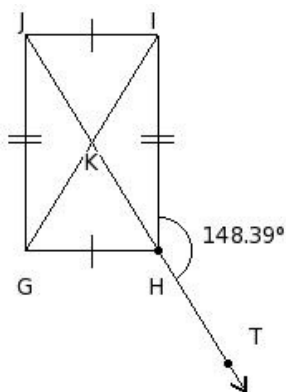
- (i) 17° (ii) 13° (iii) 15° (iv) 14° (v) 16°

30. In the adjoining figure, $ABCD$ is a rhombus whose diagonals intersect at O . If $\angle OAB : \angle ABO = 9 : 9$, find the angles of $\triangle OAB$.



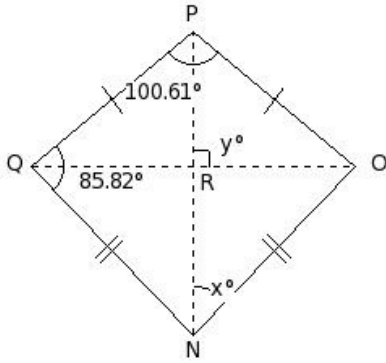
- (i) $O=92^\circ, A=45^\circ, B=43^\circ$ (ii) $O=88^\circ, A=47^\circ, B=45^\circ$ (iii) $O=88^\circ, A=45^\circ, B=47^\circ$ (iv) $O=90^\circ, A=43^\circ, B=47^\circ$
 (v) $O=90^\circ, A=45^\circ, B=45^\circ$

31. In the given figure, $GHIJ$ is a rectangle whose diagonals intersect at K . Diagonal HJ is produced to T and $\angle IHT = 148.39^\circ$. Find the angles of $\triangle KGH$.



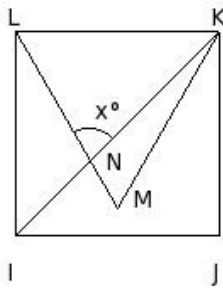
- (i) $K=61.22^\circ, G=60.39^\circ, H=58.39^\circ$ (ii) $K=61.22^\circ, G=58.39^\circ, H=60.39^\circ$ (iii) $K=63.22^\circ, G=56.39^\circ, H=60.39^\circ$
 (iv) $K=63.22^\circ, G=58.39^\circ, H=58.39^\circ$ (v) $K=65.22^\circ, G=58.39^\circ, H=56.39^\circ$

32. In the given figure, NOPQ is a kite whose diagonals intersect at R.
If $\angle OPQ = 100.61^\circ$ and $\angle PQN = 85.82^\circ$, calculate $\angle RNO$ and $\angle PRO$.



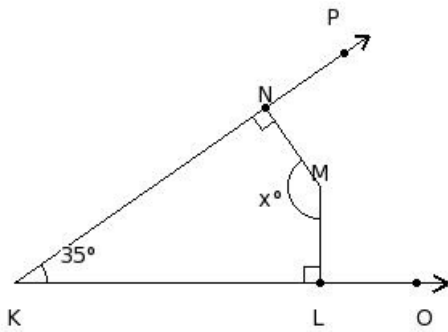
- (i) $x=45.88^\circ, y=92^\circ$ (ii) $x=41.88^\circ, y=88^\circ$ (iii) $x=43.88^\circ, y=90^\circ$ (iv) $x=42.88^\circ, y=89^\circ$
(v) $x=44.88^\circ, y=91^\circ$

33. $\triangle MKL$ is an equilateral triangle in a square IJKL.
If IK and LM intersect at N, then find the value of x.



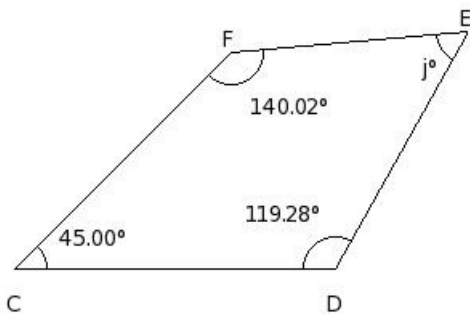
- (i) 75° (ii) 73° (iii) 74° (iv) 77° (v) 76°

34. In the adjoining figure, M is a point in the interior of $\angle OKP$.
If $ML \perp KO$ and $MN \perp KP$ and $\angle OKP = 35^\circ$, find the measure of x.



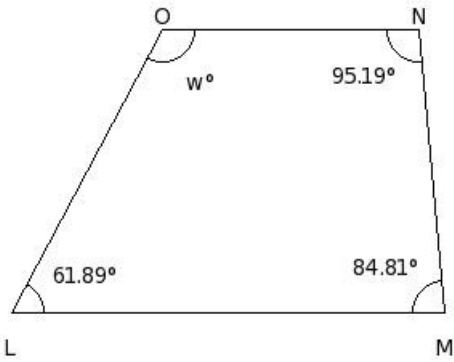
- (i) 143° (ii) 147° (iii) 145° (iv) 144° (v) 146°

35. Find the missing angle in the given quadrilateral



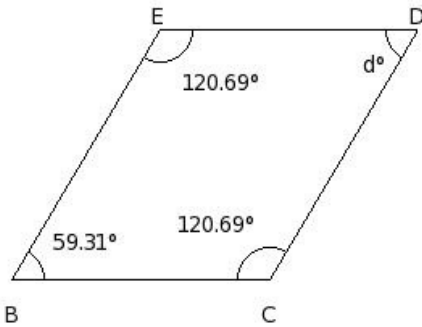
- (i) 55.7° (ii) 60.7° (iii) 70.7° (iv) 65.7° (v) 85.7°

36. Find the missing angle in the given trapezium



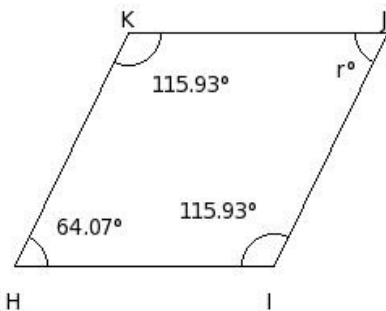
- (i) 118.11° (ii) 128.11° (iii) 148.11° (iv) 133.11° (v) 123.11°

37. Find the missing angle in the given parallelogram



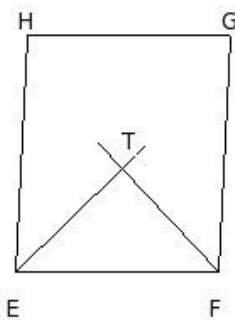
- (i) 89.31° (ii) 59.31° (iii) 69.31° (iv) 74.31° (v) 64.31°

38. Find the missing angle in the given rhombus



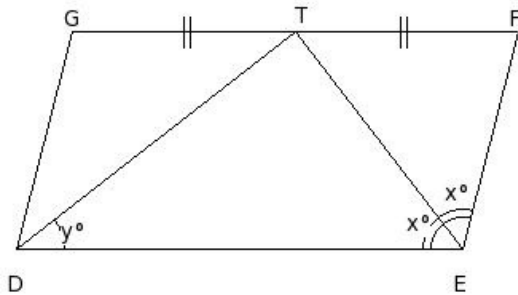
- (i) 79.07° (ii) 69.07° (iii) 64.07° (iv) 94.07° (v) 74.07°

39. In the given figure, EFGH is a parallelogram. If ET and FT are bisector of $\angle E$ & $\angle F$, find $\angle T$



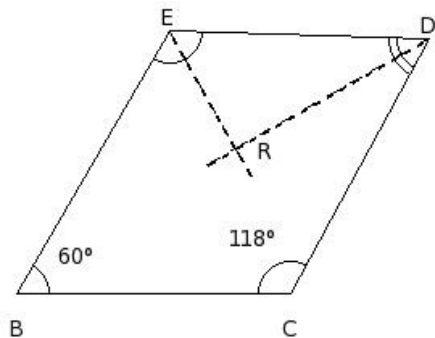
- (i) 91° (ii) 88° (iii) 90° (iv) 92° (v) 89°

40. In the given figure, DEFG is a parallelogram. T is the mid-point of FG. ET bisects $\angle E$. If $x = 52^\circ$, find angle 'y'.



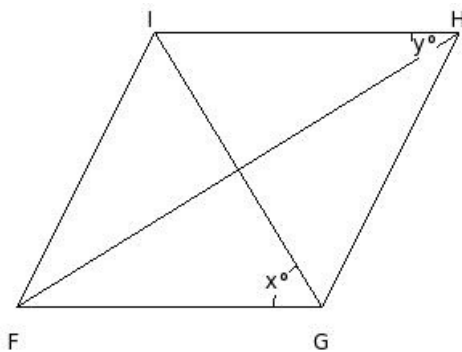
- (i) 39° (ii) 38° (iii) 36° (iv) 40° (v) 37°

41. In the given figure, BCDE is a quadrilateral. RE and RD are bisectors of $\angle E$ & $\angle D$ meeting at R. Find $\angle DRE$



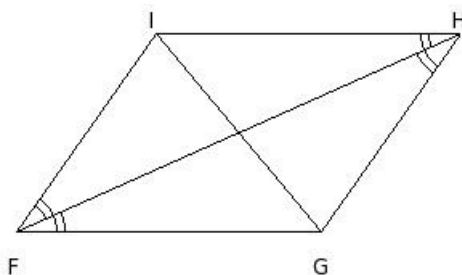
- (i) 87.0° (ii) 91.0° (iii) 88.0° (iv) 90.0° (v) 89.0°

42. In the given figure, FGHI is a rhombus. Given $x = 59^\circ$, find the value of 'y'.



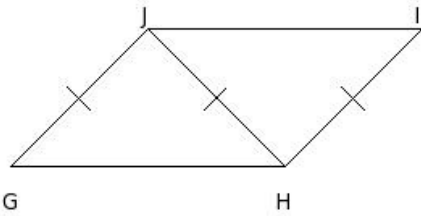
- (i) 31° (ii) 30° (iii) 33° (iv) 29° (v) 32°

43. In the given figure, FGHI is a parallelogram. FH bisects $\angle F$ & $\angle H$. Given $FH = 12$ cm and $GI = 8$ cm, find FG



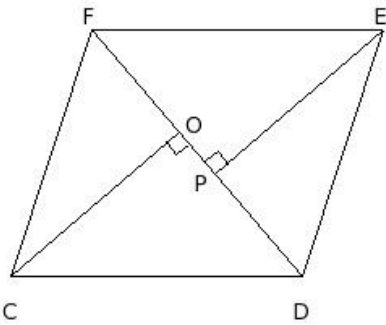
- (i) 9.21 cm (ii) 8.21 cm (iii) 7.21 cm (iv) 5.21 cm (v) 6.21 cm

44. In the given figure, $GHIJ$ is a parallelogram. HJ is the diagonal such that $GJ = HJ = HI$. Given $\angle G = 45^\circ$, find $\angle JHI$



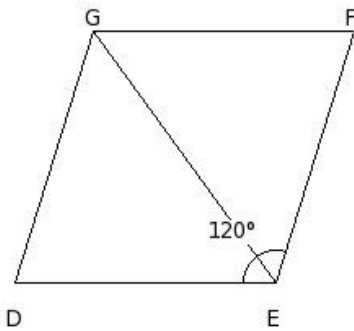
- (i) 90° (ii) 92° (iii) 88° (iv) 89° (v) 91°

45. In the given figure, $CDEF$ is a parallelogram. CO and EP are perpendicular to the diagonal DF . Given $\angle PEF = 41^\circ$, find $\angle FDC$



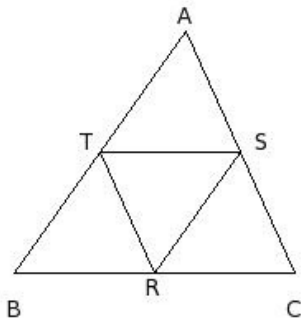
- (i) 47° (ii) 51° (iii) 49° (iv) 50° (v) 48°

46. In the given figure, $DEFG$ is a rhombus such that $\angle E = 120^\circ$. Then $\triangle DEG$ is



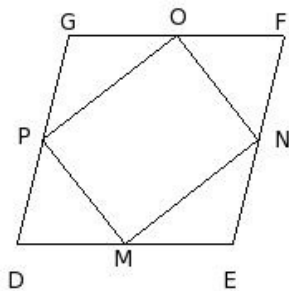
- (i) Obtuse angled triangle (ii) Right angled triangle (iii) Isosceles triangle (iv) Equilateral triangle

47. R, S, T are the mid-points of the sides of triangle ABC . If the perimeter of the $\triangle ABC$ is 51 cm, the perimeter of $\triangle RST$ is



- (i) 23.5 cm (ii) 24.5 cm (iii) 25.5 cm (iv) 27.5 cm (v) 26.5 cm

48. DEFG is a rhombus. M, N, O and P are mid-points of sides DE, EF, FG and GD. Find $\angle NOP$

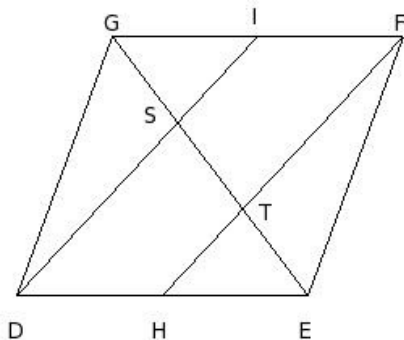


- (i) 88° (ii) 91° (iii) 90° (iv) 92° (v) 89°

In the given figure, DEFG is a parallelogram

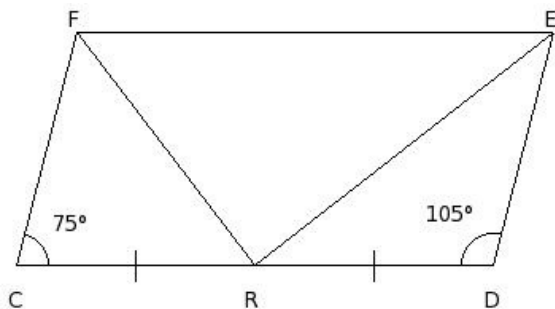
49. such that H and I are mid-points of sides DE & FG.

DI meets EG at S and FH meets EG at T. Given $EG = 20$ cm, find SG



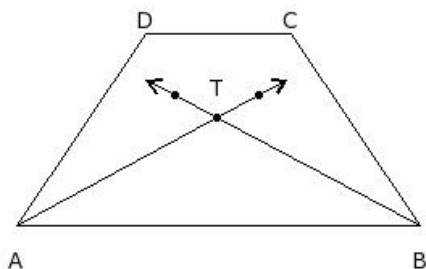
- (i) 6.67 cm (ii) 4.67 cm (iii) 8.67 cm (iv) 5.67 cm (v) 7.67 cm

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



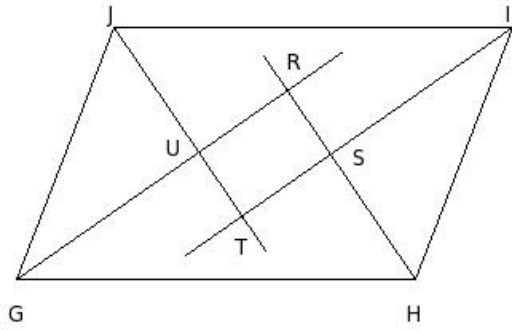
- (i) 90° (ii) 91° (iii) 89° (iv) 88° (v) 92°

51. ABCD is an isosceles trapezium. AT and BT are angular bisector of $\angle A$ & $\angle B$. If $\angle A = 56^\circ$, find $\angle ATB$



- (i) 125° (ii) 123° (iii) 124° (iv) 122° (v) 126°

52. In the given figure, GHIJ is a parallelogram. The bisector of the angles G, H, I & J intersect at R, S, T & U to form a quadrilateral. Find $\angle TUR$



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

Assignment Key

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