EduSahara™ Assignment

Name : Quadrilateral Angle Properties

Chapter : Quadrilaterals

Grade : ICSE Grade VIII

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1. In parallelogram ABCD, if $\angle A = 22.33°$, then find the value of $\angle C$

   (i) 24.33° (ii) 21.33° (iii) 20.33° (iv) 23.33° (v) 22.33°

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

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

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

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

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

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

5. NOPQ is a rhombus in which $\angle N = 120°$.
   $\overline{OQ}$
   is the diagonal. Then $\triangle NOP$ is

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

   (v) None of these

6. LMNO is a rhombus in which $\angle L = 119°$.
   $\overline{MO}$
   is the diagonal. Then $\triangle LMN$ is

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

   (v) an equilateral triangle

7. The angles of a quadrilateral BCDE are in the ratio 6 : 4 : 10 : 20. Find the measure of each angle of the quadrilateral.

   (i) B=55°,C=35°,D=92°,E=178° (ii) B=54°,C=36°,D=90°,E=180° (iii) B=56°,C=35°,D=88°,E=181°

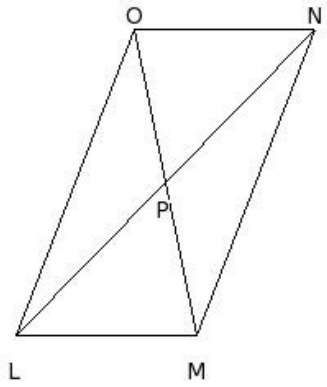
   (iv) B=53°,C=34°,D=91°,E=182° (v) B=52°,C=38°,D=89°,E=181°

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

   (i) H=60°,I=120°,J=60°,K=120° (ii) H=58°,I=122°,J=59°,K=121° (iii) H=59°,I=118°,J=61°,K=122°

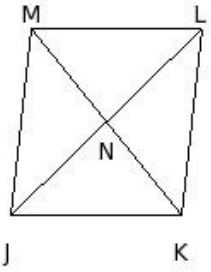
   (iv) H=61°,I=119°,J=62°,K=118° (v) H=62°,I=119°,J=58°,K=121°

9. In the adjoining figure, $LMNO$ is a parallelogram in which $\angle OLN = 23.22°, \angle NLM = 45.62°, \angle OPN = 55.93°$. Calculate $\angle LMO$



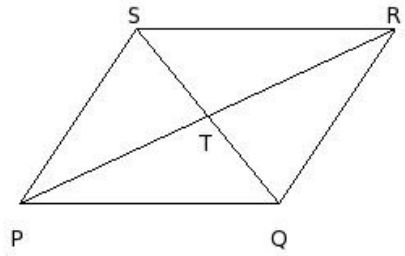
(i) 76.45° (ii) 80.45° (iii) 77.45° (iv) 78.45° (v) 79.45°

10. In the adjoining figure, $JKLM$ is a parallelogram in which $\angle MJL = 39.76°, \angle LJK = 43.96°, \angle MNL = 84.18°$. Calculate $\angle LMK$



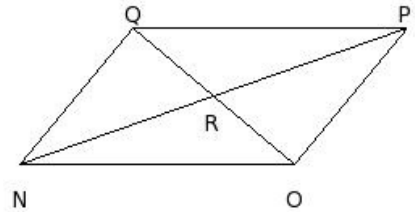
(i) 50.86° (ii) 52.86° (iii) 53.86° (iv) 49.86° (v) 51.86°

11. In the adjoining figure, $PQRS$ is a parallelogram in which $\angle SPR = 31.35°, \angle RPQ = 24.96°, \angle STR = 104.21°$. Calculate $\angle QRP$



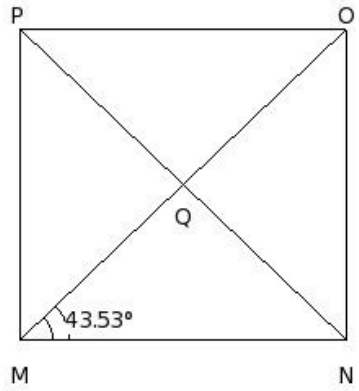
(i) 32.35° (ii) 29.35° (iii) 31.35° (iv) 30.35° (v) 33.35°

12. In the adjoining figure, $NOPQ$ is a parallelogram in which $\angle QNP = 30.9°, \angle PNO = 19.29°, \angle QRP = 120.68°$. Calculate $\angle QOP$



(i) 88.78° (ii) 90.78° (iii) 87.78° (iv) 91.78° (v) 89.78°

13. In the adjoining figure, MNOP is a rectangle. If $\angle OMN = 43.53°$, find $\angle PQO$



(i) 93.94° (ii) 92.94° (iii) 94.94° (iv) 91.94° (v) 90.94°

14. Three angles of quadrilateral measure 88.42°, 103.01° and 101.37° respectively. Find the measure of the fourth angle

(i) 65.20° (ii) 66.20° (iii) 69.20° (iv) 68.20° (v) 67.20°

15. Three angles of a quadrilateral are equal and the fourth angle measure 85.46°. What is the measure of each of the equal angles?

(i) 90.51° (ii) 93.51° (iii) 91.51° (iv) 92.51° (v) 89.51°

16. Two angles of a quadrilateral are of measure 114.98° and 46.34° respectively and the other two angles are equal. Find the measure of each of the equal angles.

(i) 98.34° (ii) 99.34° (iii) 101.34° (iv) 100.34° (v) 97.34°

17. A quadrilateral has three acute angles, each measuring 34°. What is the measure of its fourth angle?

(i) 256.00° (ii) 258.00° (iii) 259.00° (iv) 257.00° (v) 260.00°

18. One angle of a parallelogram measures $O = 47.16°$.
Find the measure of each of its remaining angles.

(i) $P=130.84°, Q=45.16°, R=130.84°$ (ii) $P=132.84°, Q=47.16°, R=132.84°$

(iii) $P=131.84°, Q=46.16°, R=131.84°$ (iv) $P=133.84°, Q=48.16°, R=133.84°$

(v) $P=134.84°, Q=49.16°, R=134.84°$

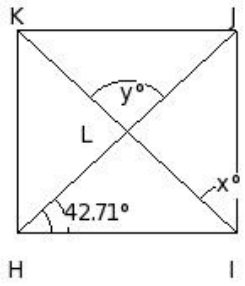
19. Two adjacent angles of a parallelogram are in the ratio $2 : 4$.
Find the measure of each of its angles.

(i) $A=60°, B=120°, C=60°, D=120°$ (ii) $A=58°, B=122°, C=59°, D=121°$

(iii) $A=62°, B=119°, C=58°, D=121°$ (iv) $A=61°, B=119°, C=62°, D=118°$

(v) $A=59°, B=118°, C=61°, D=122°$

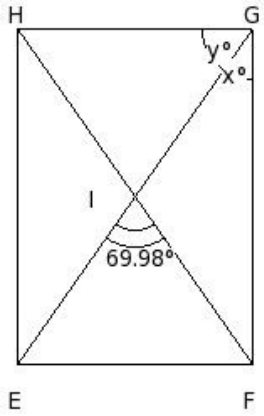
20. In the figure given below, HIJK is a rectangle. Find the values of x and y



(i) x=49.29°,y=96.58° (ii) x=46.29°,y=93.58° (iii) x=45.29°,y=92.58° (iv) x=47.29°,y=94.58°

(v) x=48.29°,y=95.58°

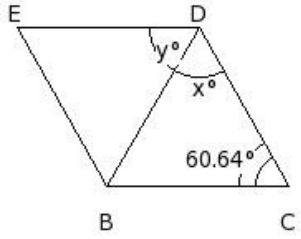
21. In the figure given below, EFGH is a rectangle. Find the values of x and y



(i) x=36.99°,y=57.01° (ii) x=32.99°,y=53.01° (iii) x=33.99°,y=54.01° (iv) x=34.99°,y=55.01°

(v) x=35.99°,y=56.01°

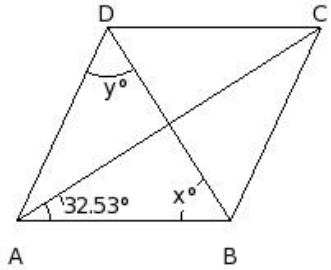
22. In the figure given below, BCDE is a rhombus. Find the values of x and y



(i) x=60.68°,y=60.68° (ii) x=57.68°,y=57.68° (iii) x=61.68°,y=61.68° (iv) x=58.68°,y=58.68°

(v) x=59.68°,y=59.68°

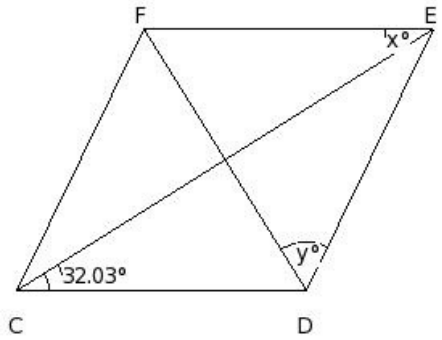
23. In the figure given below, ABCD is a rhombus. Find the values of x and y



(i) x=56.47°,y=56.47° (ii) x=59.47°,y=59.47° (iii) x=58.47°,y=58.47° (iv) x=55.47°,y=55.47°

(v) x=57.47°,y=57.47°

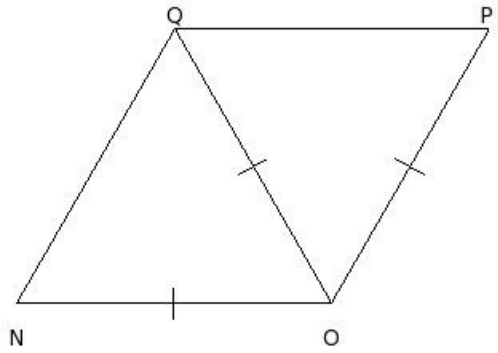
24. In the figure given below, CDEF is a rhombus. Find the values of x and y



(i) $x=30.03°, y=55.97°$ (ii) $x=33.03°, y=58.97°$ (iii) $x=32.03°, y=57.97°$ (iv) $x=34.03°, y=59.97°$

(v) $x=31.03°, y=56.97°$

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

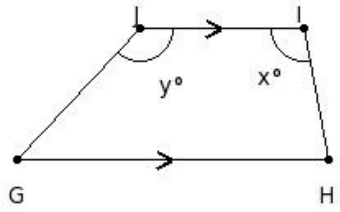


(i) $N=62°, O=119°, P=58°, Q=121°$ (ii) $N=59°, O=118°, P=61°, Q=122°$

(iii) $N=60°, O=120°, P=60°, Q=120°$ (iv) $N=61°, O=119°, P=62°, Q=118°$

(v) $N=58°, O=122°, P=59°, Q=121°$

26. In the adjoining figure, GHIJ is a trapezium in which $\overline{GH} \parallel \overline{IJ}$.
If $x = 100.62°$ and $y = 133.15°$, find the measures of $\angle G$ and $\angle H$.

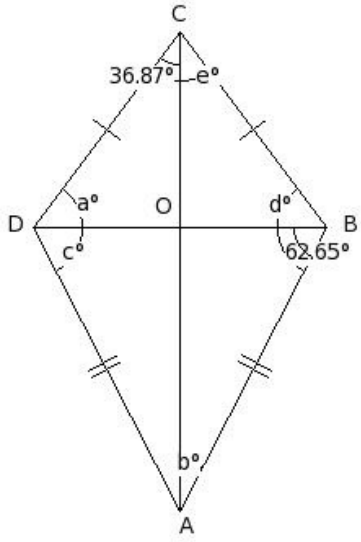


(i) $G=46.85°, H=79.38°$ (ii) $G=45.85°, H=78.38°$ (iii) $G=44.85°, H=77.38°$ (iv) $G=47.85°, H=80.38°$

(v) $G=48.85°, H=81.38°$

27. 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 $\angle OCD = 36.87°$ and $\angle ABO = 62.65°$, find the measure of each of the angles marked a,b,c,d and e.



(i) a = 53.13° , b = 28.35° , c = 61.65° , d = 53.13° , e = 36.87°

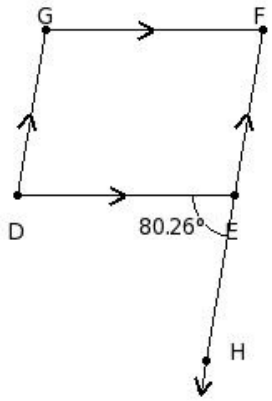
(ii) a = 53.13° , b = 28.35° , c = 61.65° , d = 55.13° , e = 34.87°

(iii) a = 53.13° , b = 28.35° , c = 61.65° , d = 55.13° , e = 36.87°

(iv) a = 53.13° , b = 27.35° , c = 62.65° , d = 53.13° , e = 36.87°

(v) a = 53.13° , b = 28.35° , c = 62.65° , d = 53.13° , e = 36.87°

28. In the adjoining figure, side EF of parallelogram DEFG has been produced to H. If $\angle DEH = 80.26°$, find the measure of each angle of the parallelogram.

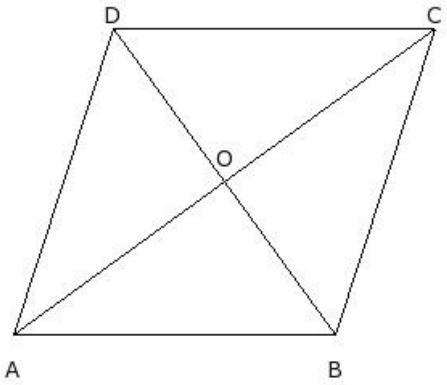


(i) D=79.26°,E=97.74°,F=81.26°,G=101.74° (ii) D=78.26°,E=101.74°,F=79.26°,G=100.74°

(iii) D=81.26°,E=98.74°,F=82.26°,G=97.74° (iv) D=82.26°,E=98.74°,F=78.26°,G=100.74°

(v) D=80.26°,E=99.74°,F=80.26°,G=99.74°

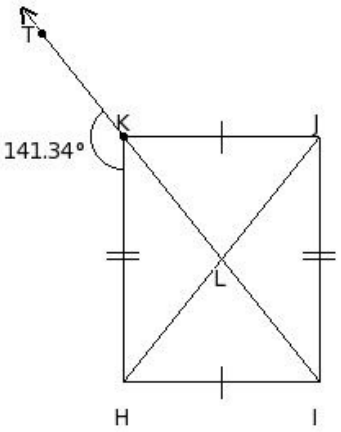
29. In the adjoining figure, $ABCD$ is a rhombus whose diagonals intersect at O.
If $\angle OAB : \angle ABO = 2 : 3$, find the angles of $\triangle OAB$.



(i) $O = 90°, A = 36°, B = 54°$ (ii) $O = 90°, A = 34°, B = 56°$ (iii) $O = 88°, A = 38°, B = 54°$ (iv) $O = 88°, A = 36°, B = 56°$

(v) $O = 92°, A = 36°, B = 52°$

30. In the given figure, $HIJK$ is a rectangle whose diagonals intersect at L.
Diagonal IK is produced to T and $\angle HKT = 141.34°$. Find the angles of $\triangle LJK$.



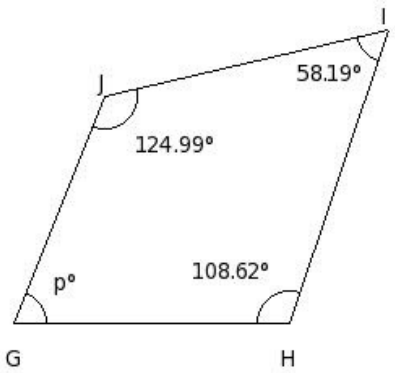
(i) $L = 75.32°, J = 51.34°, K = 53.34°$ (ii) $L = 77.32°, J = 51.34°, K = 51.34°$ (iii) $L = 75.32°, J = 53.34°, K = 51.34°$

(iv) $L = 79.32°, J = 51.34°, K = 49.34°$ (v) $L = 77.32°, J = 49.34°, K = 53.34°$

31. The measures of three angles of a quadrilateral are $50.75°, 115.95°$ and $69.51°$. Find the fourth angle

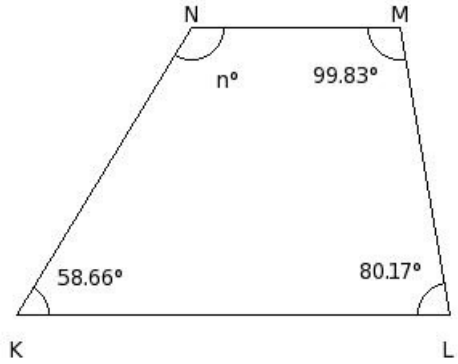
(i) $138.79°$ (ii) $123.79°$ (iii) $128.79°$ (iv) $133.79°$ (v) $153.79°$

32. Find the missing angle in the given quadrilateral



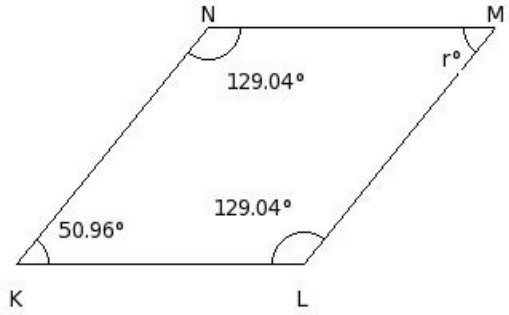
(i) $73.2°$ (ii) $68.2°$ (iii) $83.2°$ (iv) $78.2°$ (v) $98.2°$

33. Find the missing angle in the given trapezium



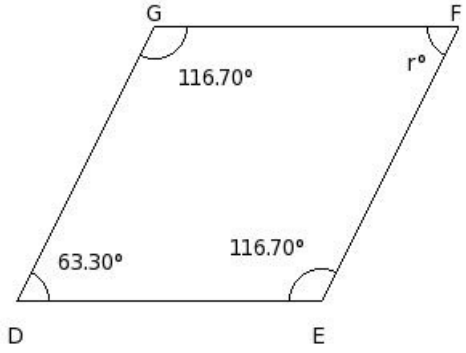
(i) 131.34° (ii) 121.34° (iii) 126.34° (iv) 151.34° (v) 136.34°

34. Find the missing angle in the given parallelogram



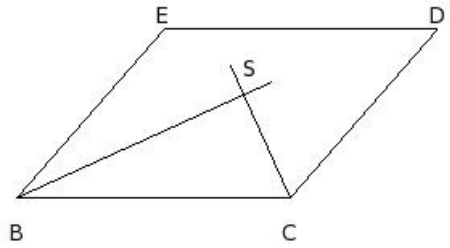
(i) 55.96° (ii) 60.96° (iii) 65.96° (iv) 80.96° (v) 50.96°

35. Find the missing angle in the given rhombus



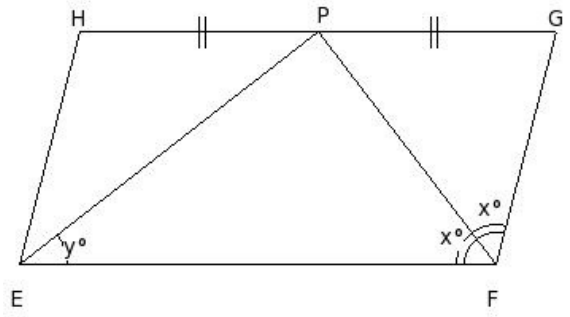
(i) 63.3° (ii) 73.3° (iii) 93.3° (iv) 78.3° (v) 68.3°

36. In the given figure, BCDE is a parallelogram.
If BS and CS are bisector of ∠B & ∠C, find ∠S



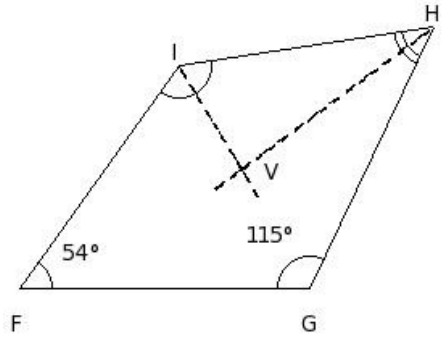
(i) 90° (ii) 89° (iii) 88° (iv) 92° (v) 91°

37. In the given figure, EFGH is a parallelogram. P is the mid-point of GH.
FP bisects ∠F. If x = 53°, find angle 'y'.



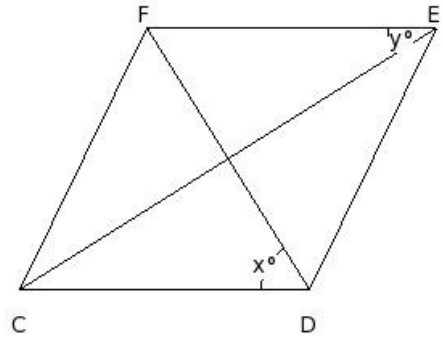
(i) 37° (ii) 38° (iii) 39° (iv) 36° (v) 35°

38. In the given figure, FGHI is a quadrilateral. VI and VH are bisectors of ∠I & ∠H meeting at V. Find ∠HVI



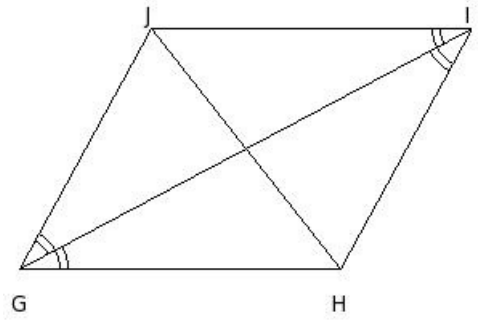
(i) 85.5° (ii) 84.5° (iii) 82.5° (iv) 83.5° (v) 86.5°

39. In the given figure, CDEF is a rhombus. Given x = 58°, find the value of 'y'.



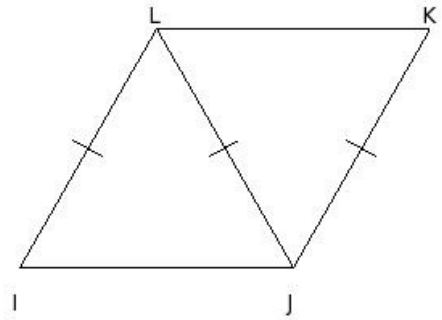
(i) 32° (ii) 33° (iii) 34° (iv) 30° (v) 31°

40. In the given figure, GHIJ is a parallelogram. GI bisects ∠G & ∠I.
Given GI = 15 cm and HJ = 10 cm, find GH



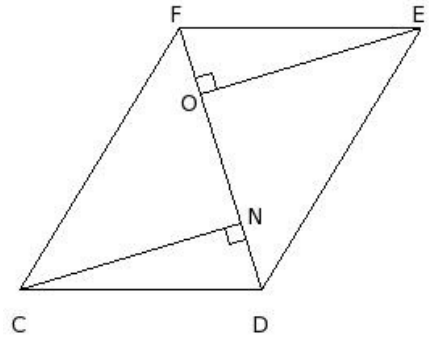
(i) 9.01 cm (ii) 7.01 cm (iii) 10.01 cm (iv) 8.01 cm (v) 11.01 cm

41. In the given figure, IJKL is a parallelogram. JL is the diagonal such that IL = JL = JK. Given ∠I = 60°, find ∠LJK



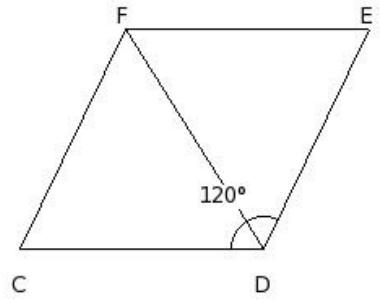
(i) 58° (ii) 62° (iii) 59° (iv) 60° (v) 61°

42. In the given figure, CDEF is a parallelogram. CN and EO are perpendicular to the diagonal DF. Given ∠OEF = 17°, find ∠FDC



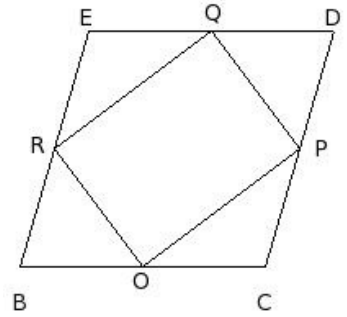
(i) 73° (ii) 71° (iii) 72° (iv) 74° (v) 75°

43. In the given figure, CDEF is a rhombus such that ∠D = 120°. Then △CDF is



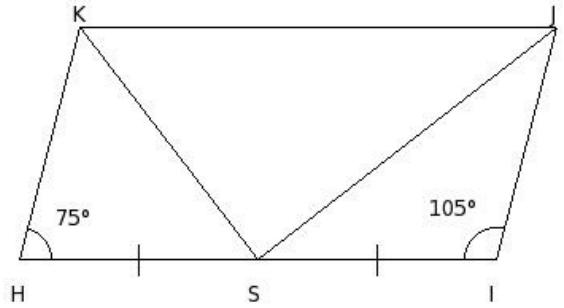
(i) Obtuse angled triangle (ii) Equilateral triangle (iii) Right angled triangle (iv) Isosceles triangle

44. BCDE is a rhombus. O, P, Q and R are mid-points of sides BC, CD, DE and EB. Find ∠PQR



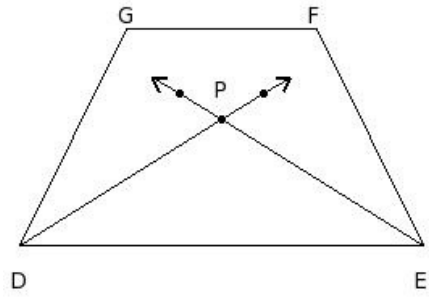
(i) 91° (ii) 92° (iii) 89° (iv) 88° (v) 90°

45. In the given figure, HIJK is a parallelogram such that S is the mid-point of HI and HI = 2KH. Find ∠KSJ



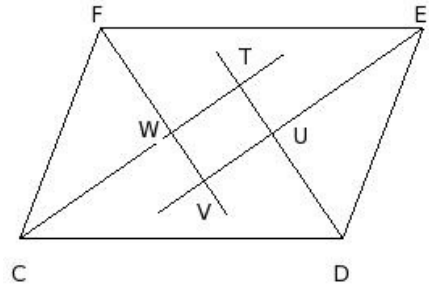
(i) 90° (ii) 92° (iii) 88° (iv) 91° (v) 89°

46. DEFG is an isosceles trapezium. DP and EP are angular bisector of ∠D & ∠E. If ∠D = 64°, find ∠DPE



(i) 114° (ii) 116° (iii) 117° (iv) 118° (v) 115°

47. In the given figure, CDEF is a parallelogram. The bisector of the angles C, D, E & F intersect at T, U, V & W to form a quadrilateral. Find ∠UVW



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

Assignment Key

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

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