EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Quadrilaterals

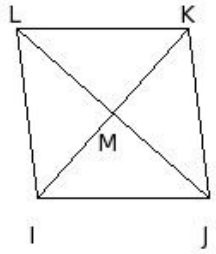
Grade : CBSE Grade IX



1. Two angles of a quadrilateral are of measure 115.37° and 130.32° respectively and the other two angles are equal. Find the measure of each of the equal angles.

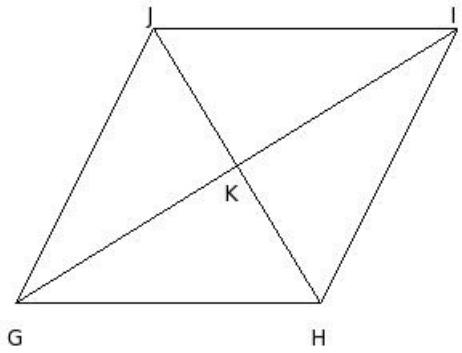
   (i) 58.16° (ii) 57.16° (iii) 55.16° (iv) 56.16° (v) 59.16°

2. In rhombus IJKL, diagonals $\overline{IK}$ and $\overline{JL}$ intersect at M. Then $\angle MLI \neq$



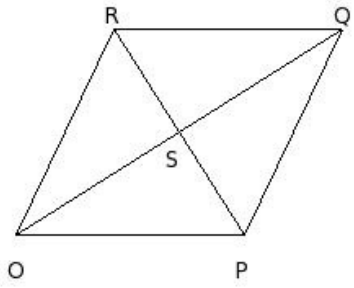

   (i) ∠IJM (ii) ∠LMK (iii) ∠KLM (iv) ∠MJK

3. In rhombus GHIJ, diagonals $\overline{GI}$ and $\overline{HJ}$ intersect at K. Then $\angle KIJ \neq$




   (i) ∠JGK (ii) ∠GKJ (iii) ∠KGH (iv) ∠HIK

4. In rhombus OPQR, diagonals $\overline{OQ}$ and $\overline{PR}$ intersect at S. Then OS =



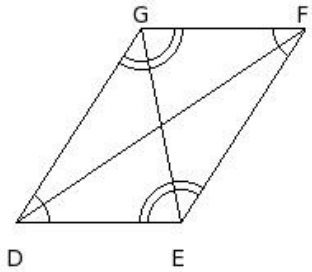

   (i) QS (ii) PS (iii) RS (iv) RO

5. Name all quadrilaterals whose all angles are right angles

   (i) square,rectangle (ii) square,kite (iii) square,parallelogram (iv) square,rhombus

   (v) parallelogram,square,rhombus,rectangle

6. The adjacent sides of the parallelogram are

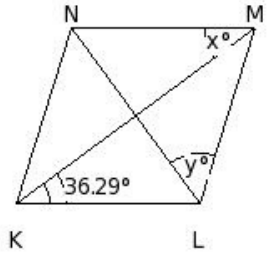



(i) $\overline{DE}$ & $\overline{EG}$ , $\overline{EG}$ & $\overline{GH}$ , $\overline{GH}$ & $\overline{HD}$ , $\overline{HD}$ & $\overline{DE}$ (ii) $\overline{DF}$ & $\overline{FE}$ , $\overline{FE}$ & $\overline{EG}$ , $\overline{EG}$ & $\overline{GD}$ , $\overline{GD}$ & $\overline{DF}$

(iii) $\overline{DE}$ & $\overline{EF}$ , $\overline{EF}$ & $\overline{FG}$ , $\overline{FG}$ & $\overline{GD}$ , $\overline{GD}$ & $\overline{DE}$ (iv) $\overline{DE}$ & $\overline{EF}$ , $\overline{EF}$ & $\overline{FH}$ , $\overline{FH}$ & $\overline{HD}$ , $\overline{HD}$ & $\overline{DE}$

(v) $\overline{DF}$ & $\overline{FG}$ , $\overline{FG}$ & $\overline{GE}$ , $\overline{GE}$ & $\overline{ED}$ , $\overline{ED}$ & $\overline{DF}$

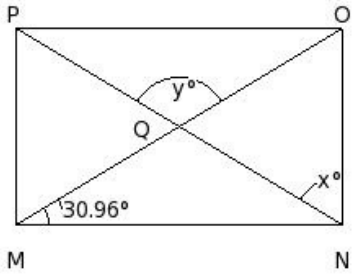
7. In the figure given below, KLMN is a rhombus. Find the values of x and y




(i) x=38.29°,y=55.71° (ii) x=35.29°,y=52.71° (iii) x=37.29°,y=54.71° (iv) x=36.29°,y=53.71°

(v) x=34.29°,y=51.71°

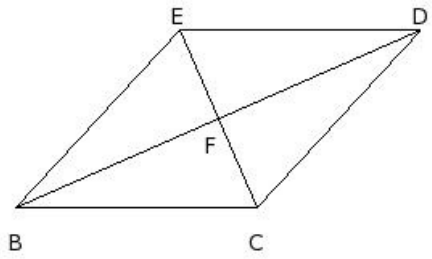
8. In the figure given below, MNOP is a rectangle. Find the values of x and y




(i) x=61.04°,y=120.08° (ii) x=57.04°,y=116.08° (iii) x=60.04°,y=119.08° (iv) x=59.04°,y=118.08°

(v) x=58.04°,y=117.08°

9. In rhombus BCDE, diagonals $\overline{BD}$ and $\overline{CE}$ intersect at F. Then $\angle DFC \neq$



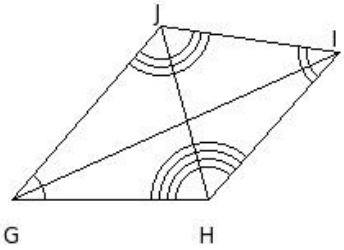

(i) ∠BFE (ii) ∠CFB (iii) ∠EFD (iv) ∠EBC

10. Name all quadrilaterals whose opposite sides are equal

(i) parallelogram,square,rhombus,rectangle (ii) square,parallelogram (iii) square,rectangle (iv) square,kite

(v) rectangle,rhombus

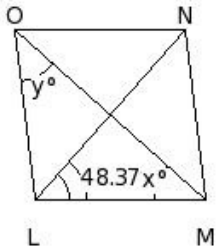
11. The opposite angles of the quadrilateral are




(i) ∠G & ∠H , ∠I & ∠J (ii) ∠G & ∠J , ∠I & ∠H (iii) ∠G & ∠J , ∠H & ∠K (iv) ∠G & ∠I , ∠H & ∠J

(v) ∠G & ∠I , ∠H & ∠K

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



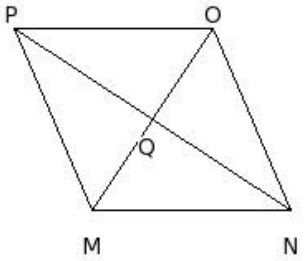

(i) x=43.63°,y=43.63° (ii) x=39.63°,y=39.63° (iii) x=40.63°,y=40.63° (iv) x=41.63°,y=41.63°

(v) x=42.63°,y=42.63°

13. Three angles of a quadrilateral are equal and the fourth angle measure 66.03°. What is the measure of each of the equal angles?

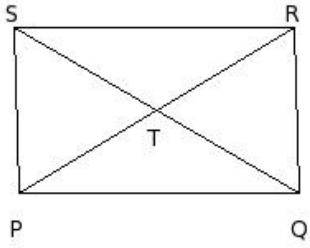
(i) 96.99° (ii) 97.99° (iii) 98.99° (iv) 99.99° (v) 95.99°

14. In rhombus MNOP, diagonals $\overline{MO}$ and $\overline{NP}$ intersect at Q. Then ∠QNO ≠



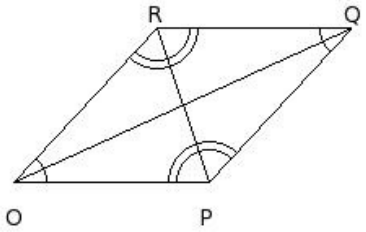

(i) ∠PQO (ii) ∠OPQ (iii) ∠QPM (iv) ∠MNQ

15. In parallelogram PQRS, diagonals $\overline{QS}$ and $\overline{PR}$ intersect at T. Then QR =




(i) PR (ii) PQ (iii) QS (iv) RS (v) SP

16. The adjacent angles of the parallelogram are

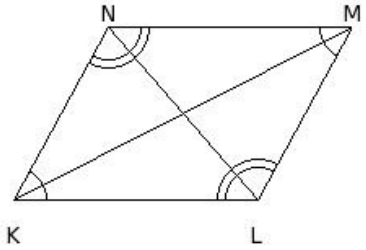



(i) ∠O & ∠Q , ∠Q & ∠R , ∠R & ∠P , ∠P & ∠O (ii) ∠O & ∠P , ∠P & ∠Q , ∠Q & ∠R , ∠R & ∠O

(iii) ∠O & ∠Q , ∠Q & ∠P , ∠P & ∠R , ∠R & ∠O (iv) ∠O & ∠P , ∠P & ∠Q , ∠Q & ∠S , ∠S & ∠O

(v) ∠O & ∠P , ∠P & ∠R , ∠R & ∠S , ∠S & ∠O

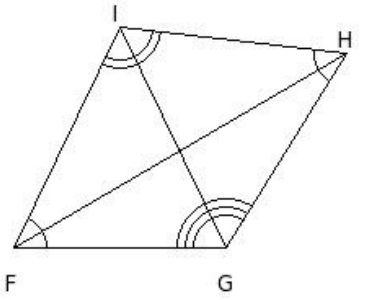
17. The opposite angles of the parallelogram are




(i) ∠K & ∠L , ∠M & ∠N (ii) ∠K & ∠N , ∠M & ∠L (iii) ∠K & ∠M , ∠L & ∠O (iv) ∠K & ∠M , ∠L & ∠N

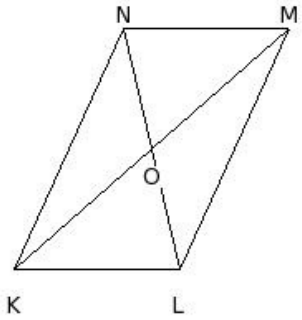
(v) ∠K & ∠N , ∠L & ∠O

18. The name of the quadrilateral is



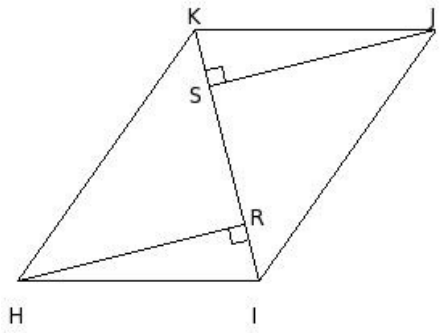

(i) FHIG (ii) FHGI (iii) FGIJ (iv) FGHI (v) FGHJ

19. In parallelogram KLMN, diagonals $\overline{LN}$ and $\overline{KM}$ intersect at O. Then MO =



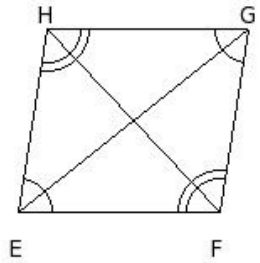

(i) NK (ii) LO (iii) KO (iv) LM (v) NO

20. In the given figure, HIJK is a parallelogram. HR and JS are perpendicular to the diagonal IK. Given ∠SJK = 14°, find ∠KIH




(i) 75° (ii) 74° (iii) 77° (iv) 78° (v) 76°

21. The vertices of the parallelogram are



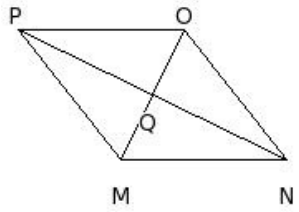

(i) E , F , H , I (ii) E , F , G , J (iii) E , F , G , H (iv) E , F , H , J (v) E , F , G , I

22. Which of the following statements are true?

a) In a parallelogram, adjacent angles are supplementary
b) In a parallelogram, both adjacent angles can be right angles
c) In a parallelogram, adjacent angles are complementary
d) In a parallelogram, both adjacent angles can be obtuse
e) In a parallelogram, both adjacent angles can be acute

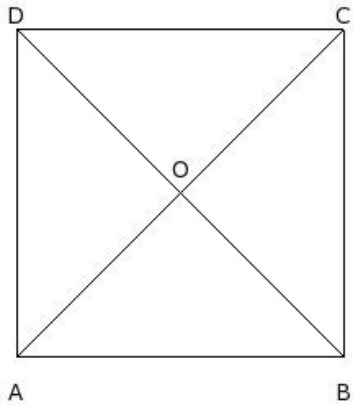
(i) {d,b} (ii) {e,c,a} (iii) {c,a} (iv) {d,b,a} (v) {a,b}

23. In rhombus MNOP, diagonals $\overline{MO}$ and $\overline{NP}$ intersect at Q. Then ∠NQM ≠




(i) ∠OQN (ii) ∠PQO (iii) ∠PMN (iv) ∠MQP

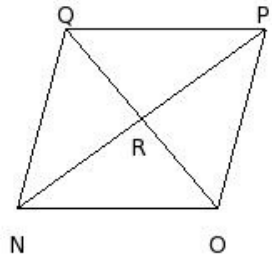
24. In the adjoining figure, $ABCD$ is a rhombus whose diagonals intersect at $O$.
If $\angle OAB : \angle ABO = 3 : 3$, find the angles of $\triangle OAB$.




(i) $O = 90°, A = 45°, B = 45°$ (ii) $O = 88°, A = 47°, B = 45°$ (iii) $O = 90°, A = 43°, B = 47°$ (iv) $O = 92°, A = 45°, B = 43°$

(v) $O = 88°, A = 45°, B = 47°$

25. In parallelogram $NOPQ$, diagonals $\overline{OQ}$ and $\overline{NP}$ intersect at $R$. Then $\angle NOP$ =




(i) $\angle OPQ$ (ii) $\angle QNO$ (iii) $\angle PQN$ (iv) $\angle PQR$ (v) $\angle NOR$

## Assignment Key

| | | | | | |
|---|---|---|---|---|---|
| 1) (ii) | 2) (ii) | 3) (ii) | 4) (i) | 5) (i) | 6) (iii) |
| 7) (iv) | 8) (iv) | 9) (iv) | 10) (i) | 11) (iv) | 12) (iv) |
| 13) (ii) | 14) (i) | 15) (v) | 16) (ii) | 17) (iv) | 18) (iv) |
| 19) (iii) | 20) (v) | 21) (iii) | 22) (v) | 23) (iii) | 24) (i) |
| 25) (iii) | | | | | |