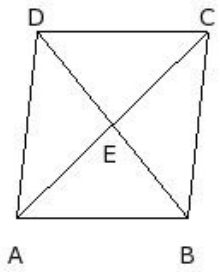
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Quadrilaterals

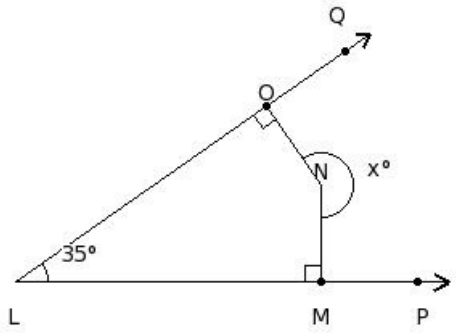
Grade : ICSE Grade IX

1. In the adjoining figure, ABCD is a parallelogram in which $\angle DAC = 39.76°, \angle CAB = 43.96°, \angle DEC = 84.18°$. Calculate $\angle DBC$



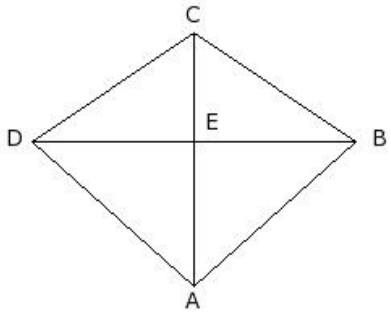
(i) 46.42° (ii) 42.42° (iii) 43.42° (iv) 45.42° (v) 44.42°

2. In the adjoining figure, N is a point in the interior of $\angle PLQ$.
If $NM \perp LP$ and $NO \perp LQ$ and $\angle PLQ = 35°$, find the measure of x .



(i) 216° (ii) 213° (iii) 215° (iv) 214° (v) 217°

3. In kite ABCD, $\overline{AC}$ and $\overline{BD}$ are diagonals. Then $\triangle CBA \cong$



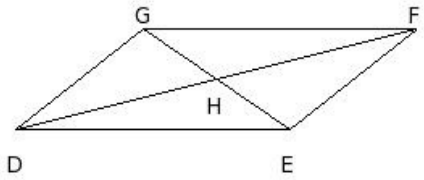
(i) $\triangle DBC$ (ii) $\triangle EDA$ (iii) $\triangle ECB$ (iv) $\triangle DBA$ (v) $\triangle CDA$

4. Name all quadrilaterals whose opposite angles are equal

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

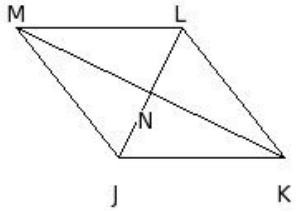
(v) parallelogram,square,rhombus,rectangle

5. In parallelogram DEFG, diagonals $\overline{EG}$ and $\overline{DF}$ intersect at H. Then FG =



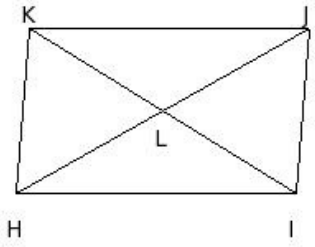
(i) GD (ii) DF (iii) EF (iv) EG (v) DE

6. In rhombus JKLM, diagonals $\overline{JL}$ and $\overline{KM}$ intersect at N. Then ∠LMJ =



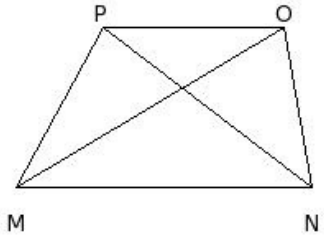
(i) ∠MJK (ii) ∠JKN (iii) ∠KLM (iv) ∠JKL

7. In parallelogram HIJK, diagonals $\overline{IK}$ and $\overline{HJ}$ intersect at L. Then △JKH ≅



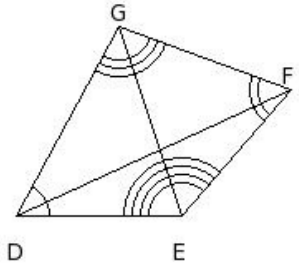
(i) △IJK (ii) △HIL (iii) △HIJ (iv) △JKL (v) △KHI

8. In trapezium MNOP, $\overline{MO}$ and $\overline{NP}$ are diagonals. Then $\overline{MN}$ ∥



(i) $\overline{OP}$ (ii) $\overline{NO}$ (iii) $\overline{PM}$ (iv) $\overline{MO}$ (v) $\overline{NP}$

9. The adjacent sides of the quadrilateral are

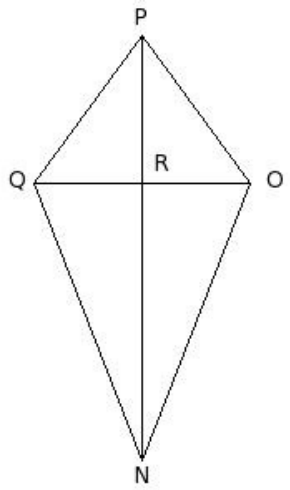


(i) $\overline{DE}$ & $\overline{EF}$, $\overline{EF}$ & $\overline{FH}$, $\overline{FH}$ & $\overline{HD}$, $\overline{HD}$ & $\overline{DE}$ (ii) $\overline{DF}$ & $\overline{FG}$, $\overline{FG}$ & $\overline{GE}$, $\overline{GE}$ & $\overline{ED}$, $\overline{ED}$ & $\overline{DF}$

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

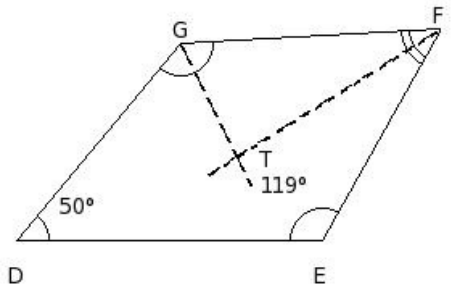
(v) $\overline{DE}$ & $\overline{EF}$, $\overline{EF}$ & $\overline{FG}$, $\overline{FG}$ & $\overline{GD}$, $\overline{GD}$ & $\overline{DE}$

10. In kite NOPQ, $\overline{NP}$ and $\overline{OQ}$ are diagonals. Then $\triangle RON \cong$



(i) $\triangle RPQ$ (ii) $\triangle QOP$ (iii) $\triangle QON$ (iv) $\triangle RQN$ (v) $\triangle RPO$

11. In the given figure, DEFG is a quadrilateral. TG and TF are bisectors of $\angle G$ & $\angle F$ meeting at T. Find $\angle FTG$



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

12. Which of the following statements are true?

a) Every rhombus is parallelogram
b) Every rectangle is a parallelogram
c) Every rectangle is a rhombus
d) Every parallelogram is a rectangle
e) Every square is a rectangle

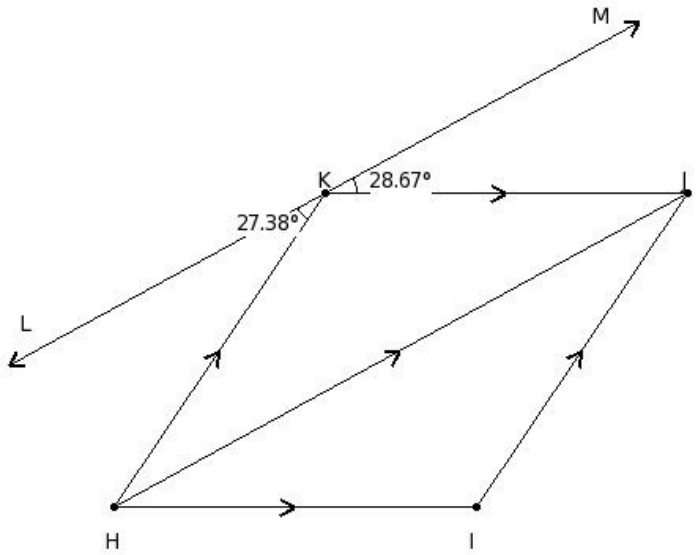
(i) {a,b,e} (ii) {c,a,b} (iii) {d,b} (iv) {c,a} (v) {c,d,e}

13. Which of the following are true?

a) A trapezium is a rhombus
b) A trapezium is a parallelogram
c) A rhombus is a trapezium
d) A rectangle is a square
e) A parallelogram is a trapezium

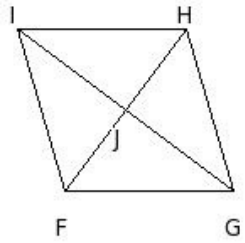
(i) {c,e} (ii) {b,e,c} (iii) {a,c} (iv) {d,a,c} (v) {b,e}

14. In the adjoining figure, HIJK is a parallelogram and LM is such that $\overline{LM} \parallel \overline{HJ}$
If $\angle HKL = 27.38°$ and $\angle JKM = 28.67°$, find the measure of $\angle HIJ$.



(i) 121.95° (ii) 122.95° (iii) 124.95° (iv) 125.95° (v) 123.95°

15. In rhombus FGHI, diagonals $\overline{FH}$ and $\overline{GI}$ intersect at J. Then $\angle HJG \neq$



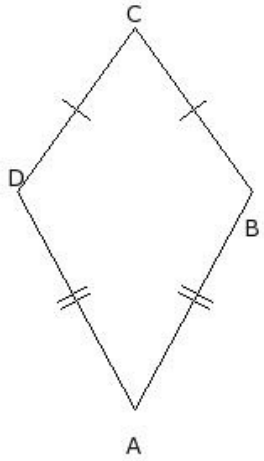
(i) ∠FJI (ii) ∠IFG (iii) ∠IJH (iv) ∠GJF

16. Name all quadrilaterals whose diagonals are equal

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

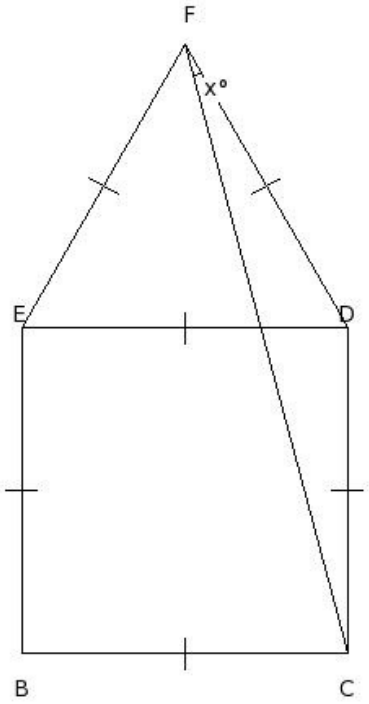
(v) parallelogram,square,rhombus,rectangle

17. Identify the figure below



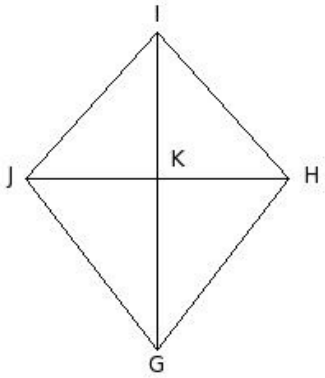
(i) trapezium (ii) kite (iii) rhombus (iv) square (v) circle

18. In the adjoining figure, equilateral $\triangle EDF$ surmounts square BCDE. If DFC = x°, find the value of x.



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

19. In kite GHIJ, $\overline{GI}$ and $\overline{HJ}$ are diagonals. Then $\triangle KJG \cong$



(i) $\triangle KIJ$ (ii) $\triangle JHG$ (iii) $\triangle JHI$ (iv) $\triangle KIH$ (v) $\triangle KHG$

20. Name all quadrilaterals whose opposite sides are parallel

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

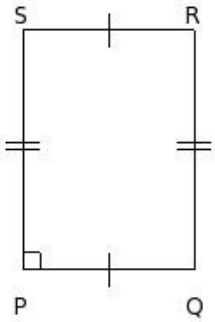
(v) square,rectangle

21. Which of the following statements are true?

a) Every parallelogram is a rectangle
b) Every rectangle is a parallelogram
c) Every square is a rectangle
d) Every square is a rhombus
e) Every parallelogram is a trapezium
f) Every rhombus is a parallelogram
g) Every rectangle is a rhombus

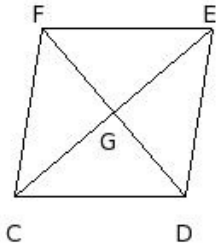
(i) {a,b} (ii) {b,c,d,e,f} (iii) {g,c} (iv) {a,e,f} (v) {a,g,d}

22. Identify the figure below



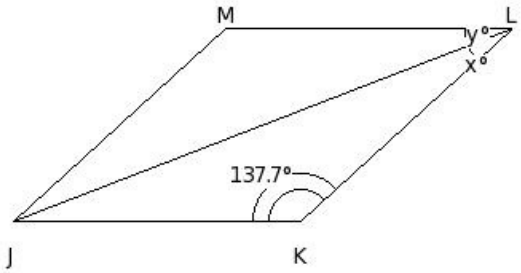
(i) rhombus (ii) square (iii) parallelogram (iv) triangle (v) rectangle

23. In rhombus CDEF, diagonals $\overline{CE}$ and $\overline{DF}$ intersect at G. Then $\angle FGE \neq$



(i) $\angle CGF$ (ii) $\angle DGC$ (iii) $\angle EGD$ (iv) $\angle FCD$

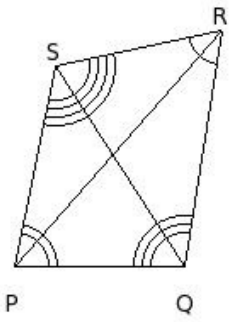
24. In the figure given below, JKLM is a rhombus. Find the values of x and y



(i) x=22.15°,y=22.15° (ii) x=20.15°,y=20.15° (iii) x=19.15°,y=19.15° (iv) x=21.15°,y=21.15°

(v) x=23.15°,y=23.15°

25. The opposite angles of the quadrilateral are



(i) $\angle P$ & $\angle R$, $\angle Q$ & $\angle S$ (ii) $\angle P$ & $\angle S$, $\angle Q$ & $\angle T$ (iii) $\angle P$ & $\angle R$, $\angle Q$ & $\angle T$ (iv) $\angle P$ & $\angle S$, $\angle R$ & $\angle Q$

(v) $\angle P$ & $\angle Q$, $\angle R$ & $\angle S$

Assignment Key

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