EduSahara™ Learning Center Assignment

Grade : Class VIII, CBSE
Chapter : Understanding Quadrilaterals
Name : Quadrilateral Angle Properties
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1. The measures of three angles of a quadrilateral are 61.26°, 103.89° and 66.12°. Find the fourth angle

(i) 158.73° (ii) 128.73° (iii) 143.73° (iv) 138.73° (v) 133.73°

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2. Sum of the interior angles in a quadrilateral is

(i) 360° (ii) 375° (iii) 365° (iv) 370° (v) 390°

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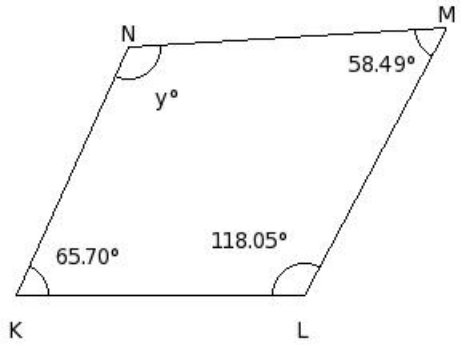
3. Find the missing angle in the given quadrilateral



(i) 117.76° (ii) 127.76° (iii) 122.76° (iv) 147.76° (v) 132.76°

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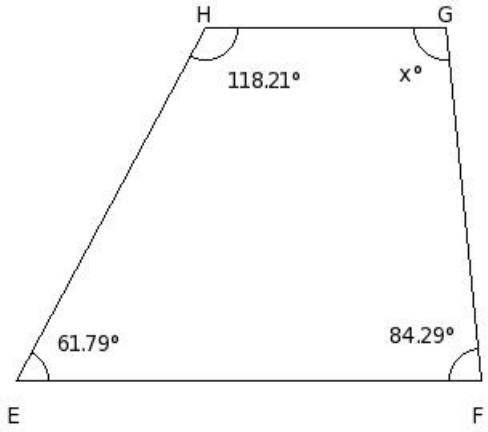
4. Find the missing angle in the given trapezium



(i) 110.71° (ii) 125.71° (iii) 100.71° (iv) 105.71° (v) 95.71°

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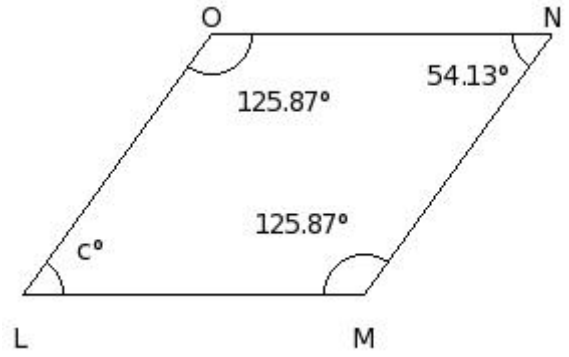
5. Find the missing angle in the given parallelogram



(i) 64.13° (ii) 59.13° (iii) 84.13° (iv) 54.13° (v) 69.13°

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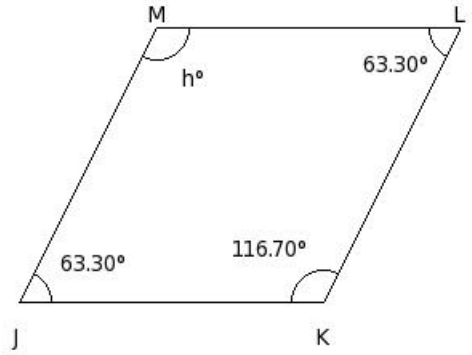
6. Find the missing angle in the given rhombus



(i) 126.7° (ii) 121.7° (iii) 146.7° (iv) 131.7° (v) 116.7°

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7. In parallelogram ABCD , if $\angle A = 45.82°$, then find the value of $\angle D$

(i) 134.18° (ii) 135.18° (iii) 132.18° (iv) 133.18° (v) 136.18°

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

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

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

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

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10. IJKL is a rhombus in which $\angle I = 120°$. $\overline{IK}$ is the diagonal. Then $\triangle IJK$ is

(i) None of these (ii) a scalene triangle
(iii) an equilateral triangle (iv) an acute angled triangle
(v) an isosceles triangle

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11. HIJK is a rhombus in which $\angle H = 140^\circ$. $\overline{HJ}$ is the diagonal. Then $\triangle HIJ$ is

(i) None of these (ii) an isosceles triangle
(iii) an acute angled triangle (iv) an equilateral triangle
(v) a scalene triangle

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12. The angles of a quadrilateral CDEF are in the ratio 27 : 15 : 12 : 66 .
Find the measure of each angle of the quadrilateral.

(i) $C = 82^\circ, D = 44^\circ, E = 38^\circ, F = 196^\circ$
(ii) $C = 83^\circ, D = 44^\circ, E = 34^\circ, F = 199^\circ$
(iii) $C = 81^\circ, D = 45^\circ, E = 36^\circ, F = 198^\circ$
(iv) $C = 80^\circ, D = 43^\circ, E = 37^\circ, F = 200^\circ$
(v) $C = 79^\circ, D = 47^\circ, E = 35^\circ, F = 199^\circ$

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13. Two adjacent angles of a parallelogram KLMN are in the ratio 37 : 53 .
Find the measure of each of its angles.

(i) $K = 75^\circ, L = 105^\circ, M = 76^\circ, N = 104^\circ$
(ii) $K = 72^\circ, L = 108^\circ, M = 73^\circ, N = 107^\circ$
(iii) $K = 73^\circ, L = 104^\circ, M = 75^\circ, N = 108^\circ$
(iv) $K = 74^\circ, L = 106^\circ, M = 74^\circ, N = 106^\circ$
(v) $K = 76^\circ, L = 105^\circ, M = 72^\circ, N = 107^\circ$

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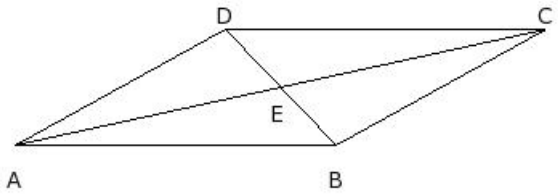
14. In the adjoining figure, ABCD is a parallelogram in which
$\angle DAC = 16.48^\circ$, $\angle CAB = 12.31^\circ$, $\angle DEC = 121.12^\circ$. Calculate $\angle ABD$



(i) 46.57° (ii) 47.57° (iii) 45.57° (iv) 48.57° (v) 44.57°

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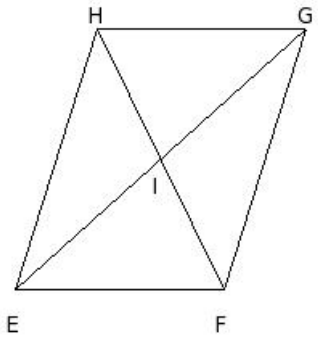
15. In the adjoining figure, EFGH is a parallelogram in which
$\angle HEG = 30.54^\circ$, $\angle GEF = 41.99^\circ$, $\angle HIG = 74.04^\circ$. Calculate $\angle GHF$



(i) 63.97° (ii) 62.97° (iii) 65.97° (iv) 61.97° (v) 64.97°

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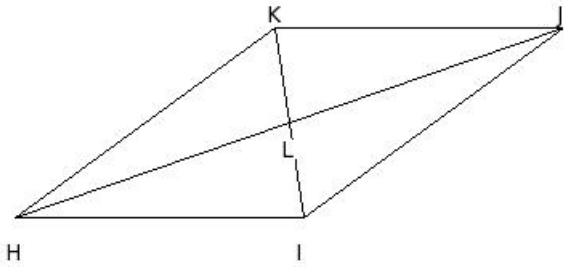
16. In the adjoining figure, HIJK is a parallelogram in which ∠KHJ = 17.04° , ∠JHI = 19.03° , ∠KLJ = 79.64° . Calculate ∠IJH



(i) 16.04° (ii) 15.04° (iii) 18.04° (iv) 19.04° (v) 17.04°

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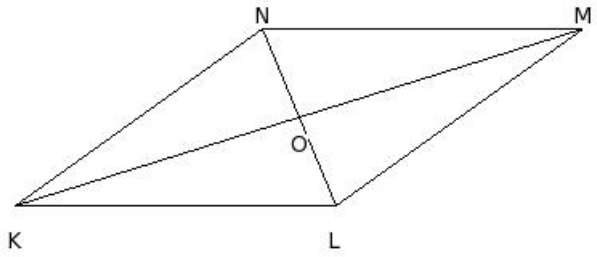
17. In the adjoining figure, KLMN is a parallelogram in which ∠NKM = 18.28° , ∠MKL = 17.26° , ∠NOM = 95.43° . Calculate ∠NLM



(i) 76.15° (ii) 79.15° (iii) 78.15° (iv) 77.15° (v) 75.15°

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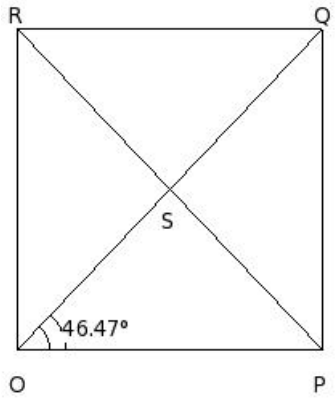
18. In the adjoining figure, OPQR is a rectangle. If ∠QOP = 46.47° , find ∠RSQ



(i) 88.06° (ii) 85.06° (iii) 86.06° (iv) 87.06° (v) 89.06°

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19. Three angles of quadrilateral measure 47.12°, 106.19° and 86.69° respectively. Find the measure of the fourth angle

(i) 122.00° (ii) 118.00° (iii) 121.00° (iv) 119.00° (v) 120.00°

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20. Three angles of a quadrilateral are equal and the fourth angle measure 59.17°. What is the measure of each of the equal angles?

(i) 99.28° (ii) 98.28° (iii) 100.28° (iv) 102.28° (v) 101.28°

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21. Two angles of a quadrilateral are of measure 72.54° and 98.38° respectively and the other two angles are equal. Find the measure of each of the equal angles.

(i) 96.54° (ii) 94.54° (iii) 93.54° (iv) 95.54° (v) 92.54°

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22. A quadrilateral has three acute angles, each measuring 49°. What is the measure of its fourth angle?

(i) 213.00° (ii) 211.00° (iii) 212.00° (iv) 214.00° (v) 215.00°

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23. One angle of a parallelogram measures L = 67.97° .
Find the measure of each of its remaining angles.

(i) M = 113.03° , N = 68.97° , O = 113.03°

(ii) M = 111.03° , N = 66.97° , O = 111.03°

(iii) M = 112.03° , N = 67.97° , O = 112.03°

(iv) M = 114.03° , N = 69.97° , O = 114.03°

(v) M = 110.03° , N = 65.97° , O = 110.03°

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24. Two adjacent angles of a parallelogram are in the ratio 3 : 27 .
Find the measure of each of its angles.

(i) A = 17°, B = 160°, C = 19°, D = 164°

(ii) A = 16°, B = 164°, C = 17°, D = 163°

(iii) A = 20°, B = 161°, C = 16°, D = 163°

(iv) A = 19°, B = 161°, C = 20°, D = 160°

(v) A = 18°, B = 162°, C = 18°, D = 162°

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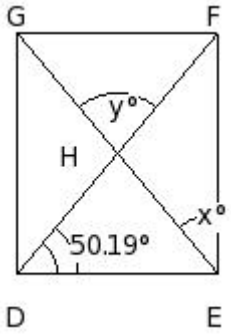
25. In the figure given below, DEFG is a rectangle. Find the values of x and y



(i) x = 40.81°, y = 80.62°

(ii) x = 41.81°, y = 81.62°

(iii) x = 39.81°, y = 79.62°

(iv) x = 37.81°, y = 77.62°

(v) x = 38.81°, y = 78.62°

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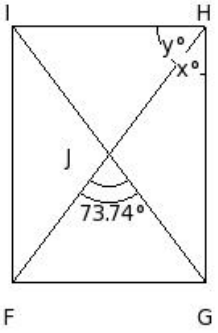
26. In the figure given below, FGHI is a rectangle. Find the values of x and y



(i) x = 34.87°, y = 51.13°

(ii) x = 36.87°, y = 53.13°

(iii) x = 37.87°, y = 54.13°

(iv) x = 35.87°, y = 52.13°

(v) x = 38.87°, y = 55.13°

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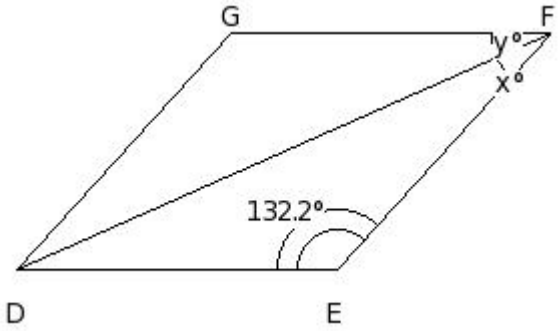
27. In the figure given below, DEFG is a rhombus. Find the values of x and y



(i) x = 23.9°, y = 23.9°

(ii) x = 25.9°, y = 25.9°

(iii) x = 21.9°, y = 21.9°

(iv) x = 22.9°, y = 22.9°

(v) x = 24.9°, y = 24.9°

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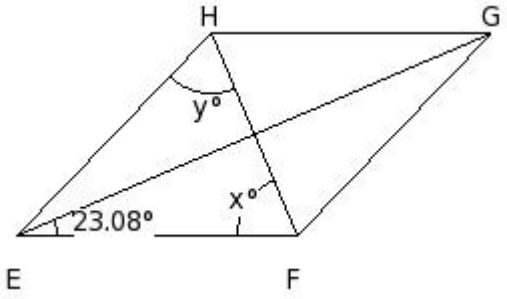
28. In the figure given below, EFGH is a rhombus. Find the values of x and y



(i) x = 68.92°, y = 68.92°

(ii) x = 65.92°, y = 65.92°

(iii) x = 67.92°, y = 67.92°

(iv) x = 66.92°, y = 66.92°

(v) x = 64.92°, y = 64.92°

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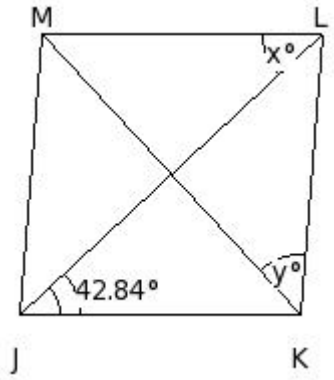
29. In the figure given below, JKLM is a rhombus. Find the values of x and y



(i) x = 40.84° , y = 45.16°

(ii) x = 44.84° , y = 49.16°

(iii) x = 42.84° , y = 47.16°

(iv) x = 41.84° , y = 46.16°

(v) x = 43.84° , y = 48.16°

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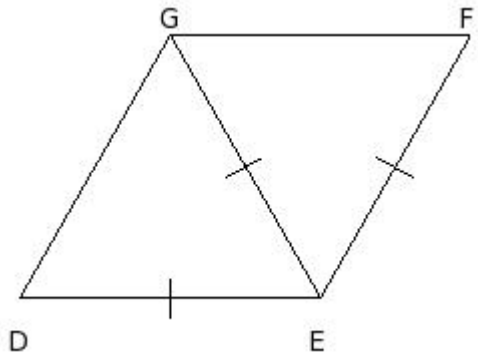
30. One of the diagonals of a rhombus is equal to one of its sides. Find the angles of the rhombus



(i) D = 60° , E = 120° , F = 60° , G = 120°

(ii) D = 59° , E = 118° , F = 61° , G = 122°

(iii) D = 61° , E = 119° , F = 62° , G = 118°

(iv) D = 62° , E = 119° , F = 58° , G = 121°

(v) D = 58° , E = 122° , F = 59° , G = 121°

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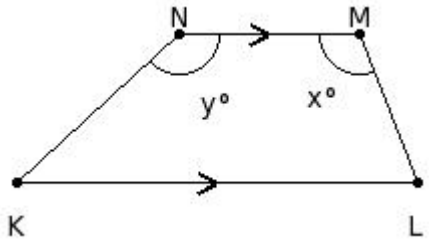
31. In the adjoining figure, KLMN is a trapezium in which $\overline{KL} \parallel \overline{MN}$.

If x = 111.4° and y = 137.59° , find the measures of ∠K and ∠L .



(i) K = 44.41° , L = 70.6°

(ii) K = 42.41° , L = 68.6°

(iii) K = 43.41° , L = 69.6°

(iv) K = 40.41° , L = 66.6°

(v) K = 41.41° , L = 67.6°

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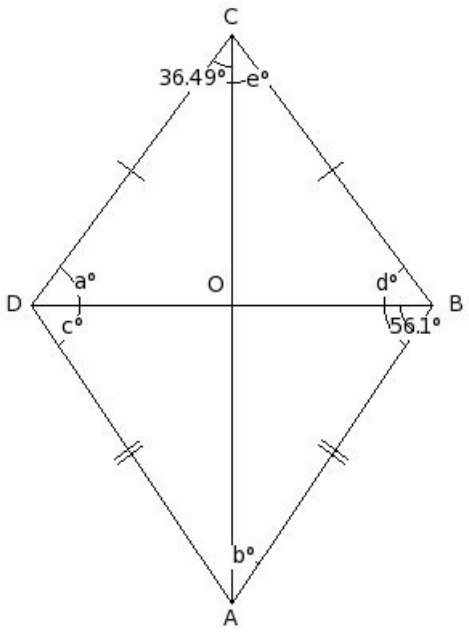
32. In the adjoining figure, ABCD is a kite in which AB = DA , BC = CD and the diagonals $\overline{BD}$ and $\overline{AC}$ intersect at O .

If ∠OCD = 36.49° and ∠ABO = 56.1°, find the measure of each of the angles marked a,b,c,d and e.



(i) a = 53.51° , b = 34.9° , c = 55.1° , d = 55.51° , e = 36.49°

(ii) a = 53.51° , b = 34.9° , c = 55.1° , d = 55.51° , e = 34.49°

(iii) a = 53.51° , b = 33.9° , c = 56.1° , d = 53.51° , e = 36.49°

(iv) a = 53.51° , b = 34.9° , c = 55.1° , d = 53.51° , e = 36.49°

(v) a = 53.51° , b = 34.9° , c = 56.1° , d = 53.51° , e = 36.49°

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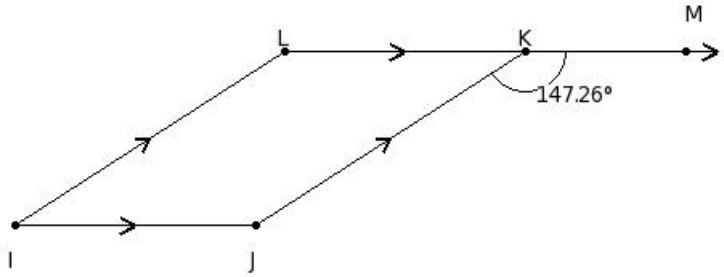
33. In the adjoining figure, side KL of parallelogram IJKL has been produced to M. If ∠JKM =

147.26° , find the measure of each angle of the parallelogram.



(i) I = 32.74° , J = 147.26° , K = 32.74° , L = 147.26°

(ii) I = 34.74° , J = 146.26° , K = 30.74° , L = 148.26°

(iii) I = 31.74° , J = 145.26° , K = 33.74° , L = 149.26°

(iv) I = 33.74° , J = 146.26° , K = 34.74° , L = 145.26°

(v) I = 30.74° , J = 149.26° , K = 31.74° , L = 148.26°

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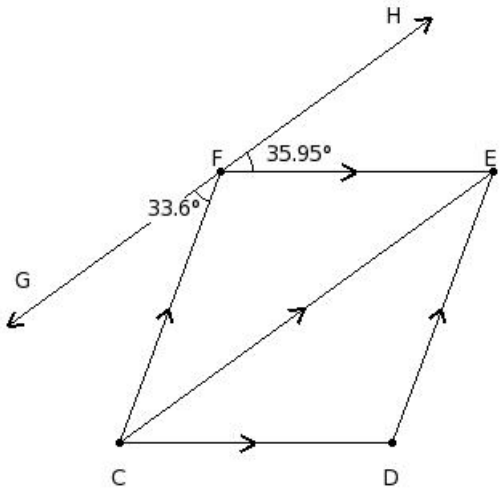
34. In the adjoining figure, CDEF is a parallelogram and GH is such that $\overline{GH} \parallel \overline{CE}$

If ∠CFG = 33.6° and ∠EFH = 35.95° , find the measure of ∠EFC .



(i) 109.44° (ii) 112.44° (iii) 108.44° (iv) 110.44° (v) 111.44°

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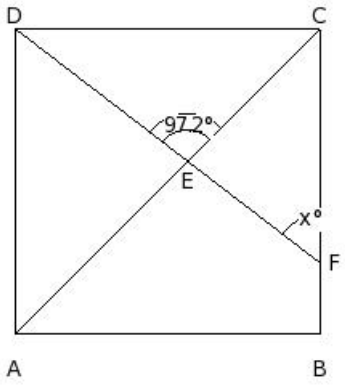
35. In the adjoining figure, ABCD is a square. A line segment DF cuts the side BC at F and the diagonal AC at E such that ∠DEC = 97.2° and ∠EFC = x°. Find the value of x .



(i) 52.20° (ii) 50.20° (iii) 51.20° (iv) 53.20° (v) 54.20°

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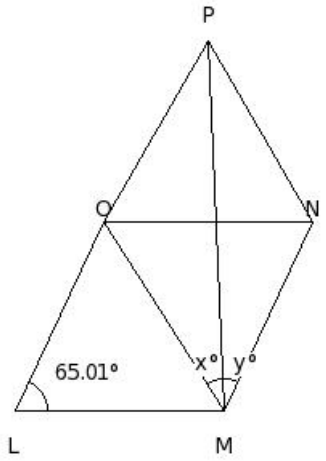
36. In the adjoining figure, LMNO is a rhombus and △PON is an equilateral triangle. P and M are on opposite sides of NO. If ∠OLM = 65.01°, find the values of x and y .



(i) x = 30° , y = 27.49°

(ii) x = 28° , y = 25.49°

(iii) x = 32° , y = 29.49°

(iv) x = 29° , y = 26.49°

(v) x = 31° , y = 28.49°

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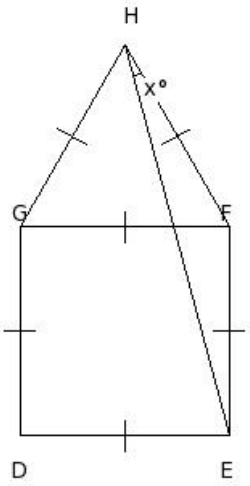
37. In the adjoining figure, equilateral △GFH surmounts square DEFG. If FHE = x°, find the value of x.



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

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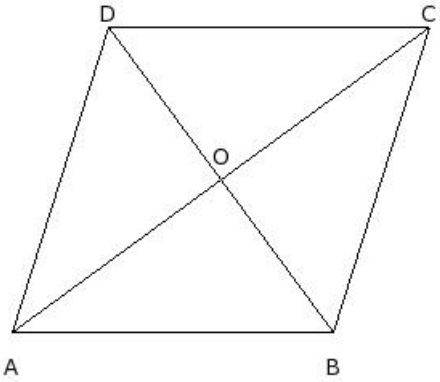
38. In the adjoining figure, ABCD is a rhombus whose diagonals intersect at O .
If ∠OAB : ∠ABO = 4 : 6 , find the angles of △OAB .



(i) O = 88° , A = 36° , B = 56°

(ii) O = 92° , A = 36° , B = 52°

(iii) O = 90° , A = 34° , B = 56°

(iv) O = 88° , A = 38° , B = 54°

(v) O = 90° , A = 36° , B = 54°

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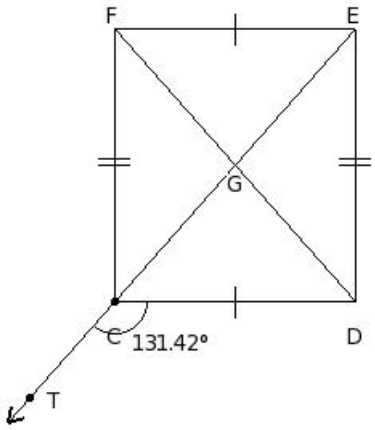
39. In the given figure, CDEF is a rectangle whose diagonals intersect at G .
Diagonal CE is produced to T and ∠DCT = 131.42° . Find the angles of △GDE .



(i) G = 95.16° , D = 41.42° , E = 43.42°

(ii) G = 97.16° , D = 39.42° , E = 43.42°

(iii) G = 99.16° , D = 41.42° , E = 39.42°

(iv) G = 95.16° , D = 43.42° , E = 41.42°

(v) G = 97.16° , D = 41.42° , E = 41.42°

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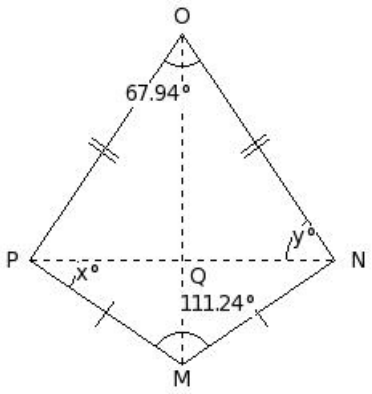
40. In the given figure, MNOP is a kite whose diagonals intersect at Q .
If ∠PMN = 111.24° and ∠NOP = 67.94° , calculate ∠QPM and ∠QNO .



(i) x = 34.38° , y = 56.03°

(ii) x = 33.38° , y = 55.03°

(iii) x = 36.38° , y = 58.03°

(iv) x = 35.38° , y = 57.03°

(v) x = 32.38° , y = 54.03°

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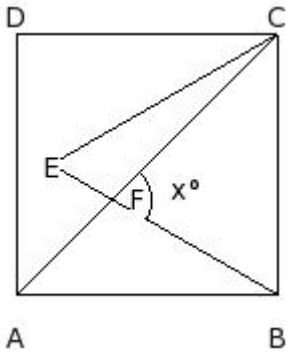
41. △EBC is an equilateral triangle in a square ABCD .
If AC and EB intersect at F , then find the value of x.



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

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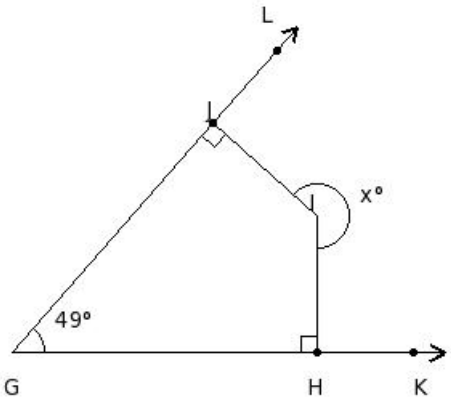
42. In the adjoining figure, I is a point in the interior of ∠KGL .
If IH ⊥ GK and IJ ⊥ GL and ∠KGL = 49° , find the measure of x .



(i) 231° (ii) 227° (iii) 228° (iv) 230° (v) 229°

Assignment Key

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

40) (i)
41) (iv)
42) (v)