EduSahara™ Assignment

Name : Quadrilateral Angle Properties

Chapter : Understanding Quadrilaterals

Grade : CBSE Grade VIII

License : Non Commercial Use

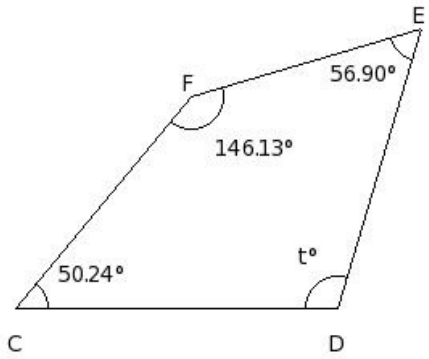
1. The measures of three angles of a quadrilateral are $60°, 120°$ and $60°$. Find the fourth angle

   (i) 150° (ii) 135° (iii) 130° (iv) 120° (v) 125°

2. Sum of the interior angles in a quadrilateral is

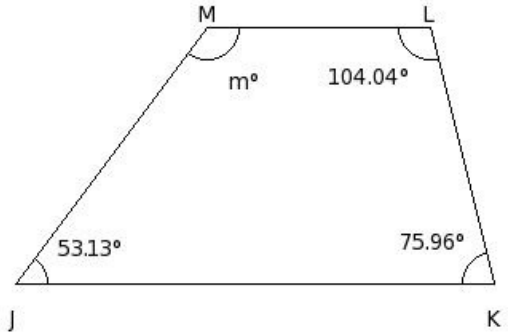
   (i) 365° (ii) 370° (iii) 360° (iv) 375° (v) 390°

3. Find the missing angle in the given quadrilateral



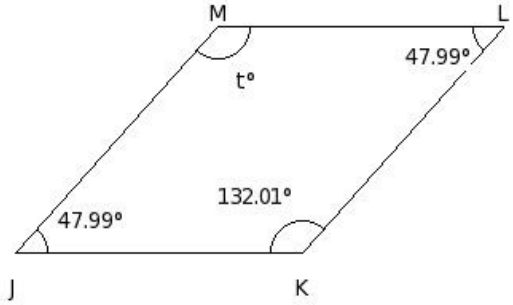
   (i) 106.73° (ii) 111.73° (iii) 116.73° (iv) 136.73° (v) 121.73°

4. Find the missing angle in the given trapezium



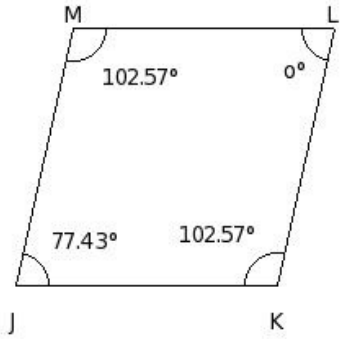
   (i) 136.87° (ii) 141.87° (iii) 131.87° (iv) 156.87° (v) 126.87°

5. Find the missing angle in the given parallelogram



   (i) 132.01° (ii) 162.01° (iii) 137.01° (iv) 147.01° (v) 142.01°

6. Find the missing angle in the given rhombus



(i) 107.43° (ii) 92.43° (iii) 82.43° (iv) 87.43° (v) 77.43°

7. In parallelogram ABCD, if ∠C = 55.84°, then find the value of ∠B

(i) 123.16° (ii) 122.16° (iii) 124.16° (iv) 125.16° (v) 126.16°

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

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

9. If ABCD is an isosceles trapezium, ∠D =

(i) ∠B (ii) ∠A (iii) 90° (iv) ∠C

DEFG is a rhombus in which ∠D = 120° .

10. $\overline{EG}$

is the diagonal. Then △DEF is

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

(v) an isosceles triangle

HIJK is a rhombus in which ∠H = 125° .

11. $\overline{IK}$

is the diagonal. Then △HIJ is

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

(v) an equilateral triangle

12. The angles of a quadrilateral OPQR are in the ratio 6 : 4 : 5 : 9. Find the measure of each angle of the quadrilateral.

(i) O=88°,P=62°,Q=74°,R=136° (ii) O=91°,P=59°,Q=77°,R=133° (iii) O=90°,P=60°,Q=75°,R=135°

(iv) O=92°,P=59°,Q=73°,R=136° (v) O=89°,P=58°,Q=76°,R=137°

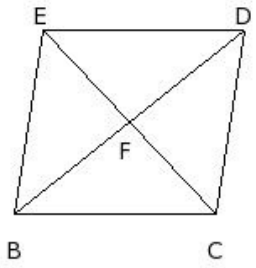
13. Two adjacent angles of a parallelogram MNOP are in the ratio 11 : 19. Find the measure of each of its angles.

(i) M=68°,N=113°,O=64°,P=115° (ii) M=66°,N=114°,O=66°,P=114°

(iii) M=65°,N=112°,O=67°,P=116° (iv) M=67°,N=113°,O=68°,P=112°

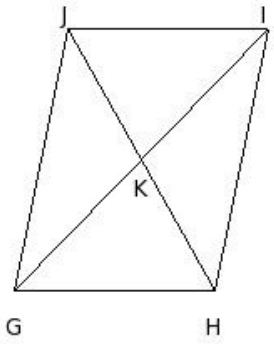
(v) M=64°,N=116°,O=65°,P=115°

14. In the adjoining figure, BCDE is a parallelogram in which $\angle EBD = 42.68°, \angle DBC = 38.45°, \angle EFD = 94.28°$. Calculate $\angle BCE$



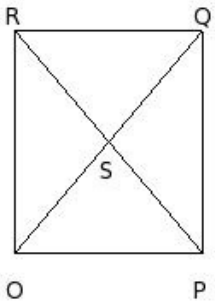
(i) 46.27° (ii) 47.27° (iii) 45.27° (iv) 48.27° (v) 49.27°

15. In the adjoining figure, GHIJ is a parallelogram in which $\angle JGI = 32.74°, \angle IGH = 45.74°, \angle JKI = 73.01°$. Calculate $\angle IJH$



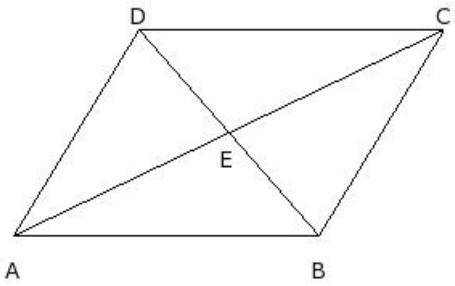
(i) 59.25° (ii) 63.25° (iii) 61.25° (iv) 60.25° (v) 62.25°

16. In the adjoining figure, OPQR is a parallelogram in which $\angle ROQ = 40.24°, \angle QOP = 49.76°, \angle RSQ = 80.48°$. Calculate $\angle PQO$



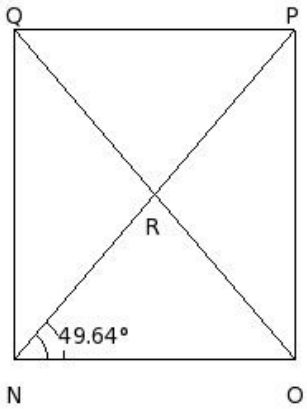
(i) 41.24° (ii) 38.24° (iii) 42.24° (iv) 40.24° (v) 39.24°

17. In the adjoining figure, ABCD is a parallelogram in which $\angle DAC = 33.11°, \angle CAB = 25.53°, \angle DEC = 105.65°$. Calculate $\angle DBC$



(i) 73.54° (ii) 72.54° (iii) 74.54° (iv) 70.54° (v) 71.54°

18. In the adjoining figure, NOPQ is a rectangle. If $\angle PNO = 49.64°$, find $\angle NOQ$



(i) 48.64° (ii) 50.64° (iii) 49.64° (iv) 51.64° (v) 47.64°

19. Three angles of quadrilateral measure 75.01°, 78.28° and 91.79° respectively. Find the measure of the fourth angle

(i) 115.92° (ii) 112.92° (iii) 116.92° (iv) 113.92° (v) 114.92°

20. Three angles of a quadrilateral are equal and the fourth angle measure 110.93°. What is the measure of each of the equal angles?

(i) 85.02° (ii) 84.02° (iii) 82.02° (iv) 81.02° (v) 83.02°

21. Two angles of a quadrilateral are of measure 75.52° and 48.58° respectively and the other two angles are equal. Find the measure of each of the equal angles.

(i) 117.95° (ii) 116.95° (iii) 118.95° (iv) 119.95° (v) 115.95°

22. A quadrilateral has three acute angles, each measuring 76°. What is the measure of its fourth angle?

(i) 132.00° (ii) 133.00° (iii) 131.00° (iv) 130.00° (v) 134.00°

23. One angle of a parallelogram measures $D = 40.16°$.
Find the measure of each of its remaining angles.

(i) $E=137.84°, F=38.16°, G=137.84°$ (ii) $E=139.84°, F=40.16°, G=139.84°$

(iii) $E=140.84°, F=41.16°, G=140.84°$ (iv) $E=138.84°, F=39.16°, G=138.84°$

(v) $E=141.84°, F=42.16°, G=141.84°$

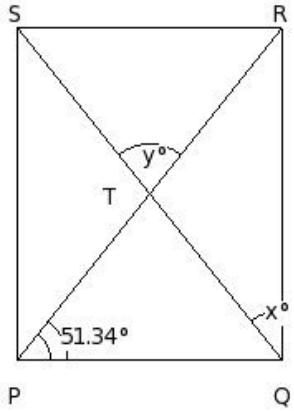
24. Two adjacent angles of a parallelogram are in the ratio $8 : 22$.
Find the measure of each of its angles.

(i) $A=46°, B=134°, C=47°, D=133°$ (ii) $A=47°, B=130°, C=49°, D=134°$

(iii) $A=50°, B=131°, C=46°, D=133°$ (iv) $A=49°, B=131°, C=50°, D=130°$

(v) $A=48°, B=132°, C=48°, D=132°$

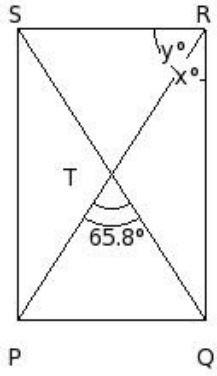
25. In the figure given below, PQRS is a rectangle. Find the values of x and y



(i) x=39.66°,y=78.32° (ii) x=38.66°,y=77.32° (iii) x=40.66°,y=79.32° (iv) x=37.66°,y=76.32°

(v) x=36.66°,y=75.32°

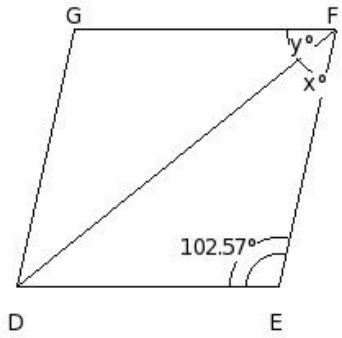
26. In the figure given below, PQRS is a rectangle. Find the values of x and y



(i) x=33.9°,y=58.1° (ii) x=31.9°,y=56.1° (iii) x=30.9°,y=55.1° (iv) x=34.9°,y=59.1°

(v) x=32.9°,y=57.1°

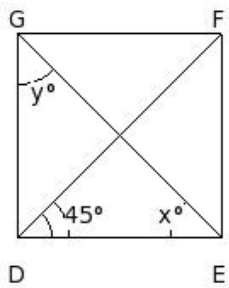
27. In the figure given below, DEFG is a rhombus. Find the values of x and y



(i) x=36.72°,y=36.72° (ii) x=37.72°,y=37.72° (iii) x=40.72°,y=40.72° (iv) x=38.72°,y=38.72°

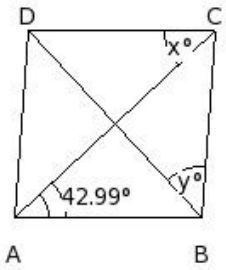
(v) x=39.72°,y=39.72°

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



(i) x=46°,y=46° (ii) x=44°,y=44° (iii) x=45°,y=45° (iv) x=47°,y=47° (v) x=43°,y=43°

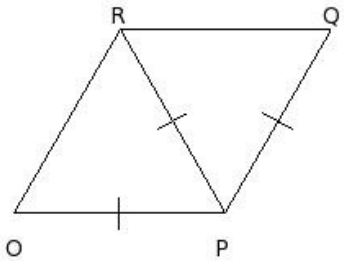
29. In the figure given below, $ABCD$ is a rhombus. Find the values of x and y



(i) $x=43.99°, y=48.01°$ (ii) $x=42.99°, y=47.01°$ (iii) $x=41.99°, y=46.01°$ (iv) $x=40.99°, y=45.01°$

(v) $x=44.99°, y=49.01°$

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

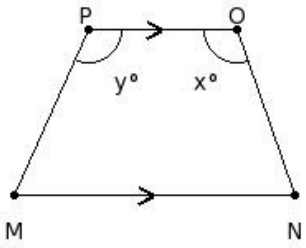


(i) $O=59°, P=118°, Q=61°, R=122°$ (ii) $O=60°, P=120°, Q=60°, R=120°$

(iii) $O=58°, P=122°, Q=59°, R=121°$ (iv) $O=62°, P=119°, Q=58°, R=121°$

(v) $O=61°, P=119°, Q=62°, R=118°$

31. In the adjoining figure, $MNOP$ is a trapezium in which $\overline{MN} \parallel \overline{OP}$.
If $x = 109.29°$ and $y = 114.23°$, find the measures of $\angle M$ and $\angle N$.

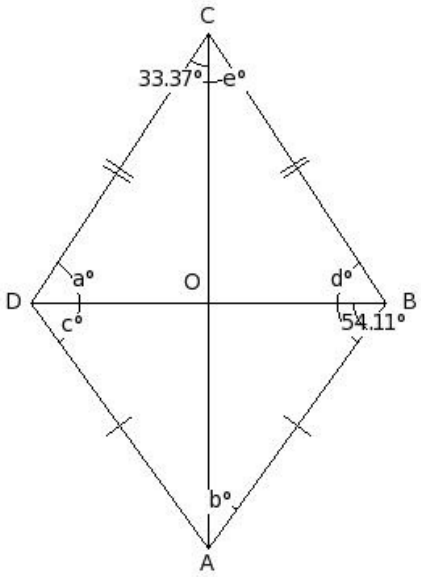


(i) $M=65.77°, N=70.71°$ (ii) $M=67.77°, N=72.71°$ (iii) $M=66.77°, N=71.71°$ (iv) $M=63.77°, N=68.71°$

(v) $M=64.77°, N=69.71°$

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 = 33.37° and ∠ABO = 54.11°, find the measure of each of the angles marked a,b,c,d and e.



(i) a = 56.63° , b = 35.89° , c = 54.11° , d = 56.63° , e = 33.37°

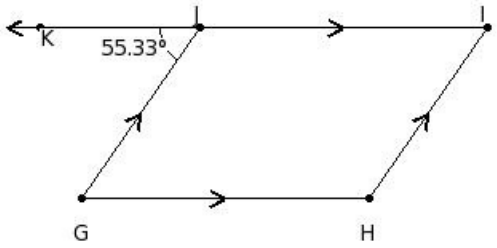
(ii) a = 56.63° , b = 36.89° , c = 53.11° , d = 58.63° , e = 33.37°

(iii) a = 56.63° , b = 36.89° , c = 53.11° , d = 58.63° , e = 31.37°

(iv) a = 56.63° , b = 36.89° , c = 53.11° , d = 56.63° , e = 33.37°

(v) a = 56.63° , b = 36.89° , c = 54.11° , d = 56.63° , e = 33.37°

33. In the adjoining figure, side IJ of parallelogram GHIJ has been produced to K. If ∠GJK = 55.33° , find the measure of each angle of the parallelogram.

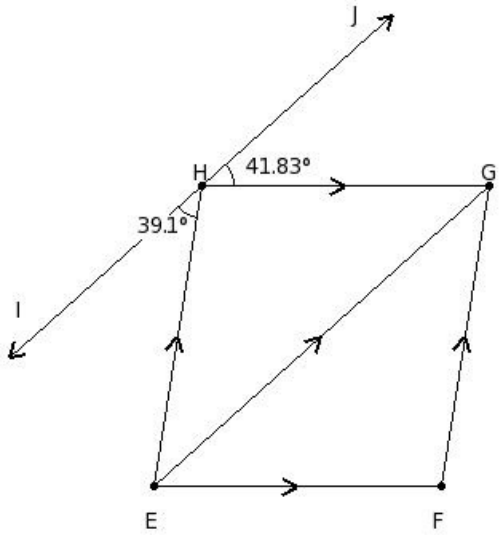


(i) G=57.33°,H=123.67°,I=53.33°,J=125.67° (ii) G=54.33°,H=122.67°,I=56.33°,J=126.67°

(iii) G=56.33°,H=123.67°,I=57.33°,J=122.67° (iv) G=53.33°,H=126.67°,I=54.33°,J=125.67°

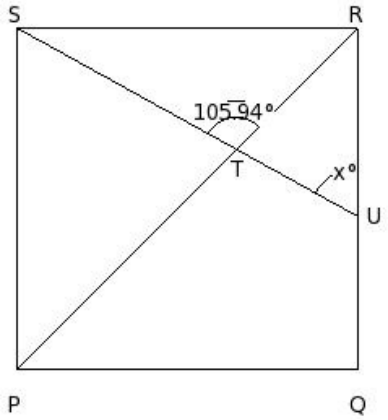
(v) G=55.33°,H=124.67°,I=55.33°,J=124.67°

34. In the adjoining figure, EFGH is a parallelogram and IJ is such that $\overline{IJ} \parallel \overline{EG}$
If $\angle EHI = 39.1°$ and $\angle GHJ = 41.83°$, find the measure of $\angle GHE$.



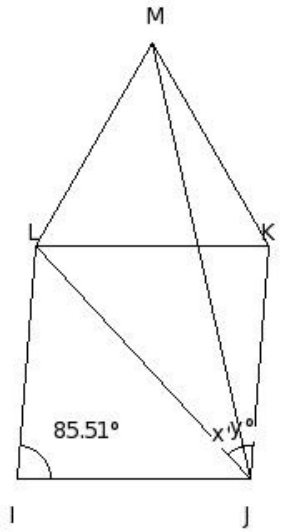
(i) 98.07° (ii) 97.07° (iii) 101.07° (iv) 100.07° (v) 99.07°

35. In the adjoining figure, PQRS is a square. A line segment SU cuts the side QR at U and the diagonal PR at T such that $\angle STR = 105.94°$ and $\angle TUR = x°$. Find the value of x .



(i) 62.94° (ii) 59.94° (iii) 60.94° (iv) 61.94° (v) 58.94°

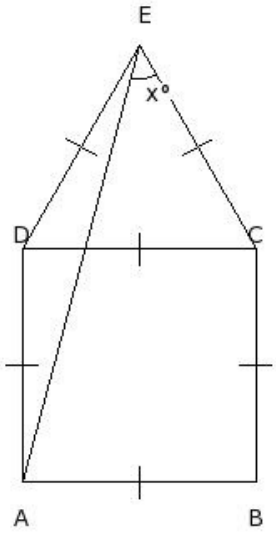
36. In the adjoining figure, IJKL is a rhombus and △MLK is an equilateral triangle. M and J are on opposite sides of KL. If $\angle LIJ = 85.51°$, find the values of x and y .



(i) $x=29°, y=16.25°$ (ii) $x=31°, y=18.25°$ (iii) $x=32°, y=19.25°$ (iv) $x=30°, y=17.25°$

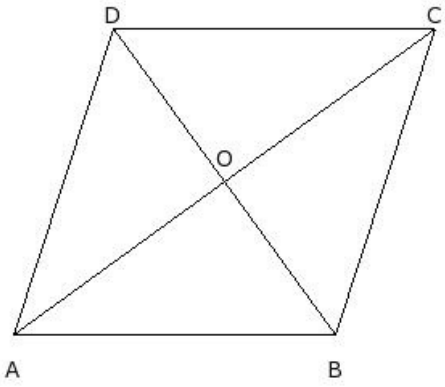
(v) $x=28°, y=15.25°$

37. In the adjoining figure, equilateral $\triangle DCE$ surmounts square ABCD. If CEA = x°, find the value of x.



(i) 46° (ii) 44° (iii) 47° (iv) 43° (v) 45°

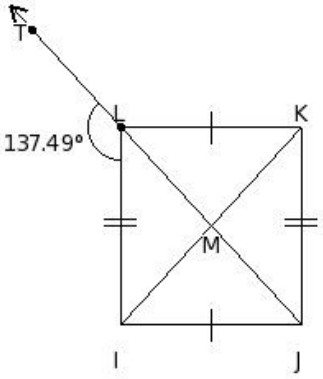
38. In the adjoining figure, ABCD is a rhombus whose diagonals intersect at O.
If $\angle OAB : \angle ABO = 2 : 3$, find the angles of $\triangle OAB$.



(i) O=88°,A=36°,B=56° (ii) O=88°,A=38°,B=54° (iii) O=90°,A=36°,B=54° (iv) O=92°,A=36°,B=52°

(v) O=90°,A=34°,B=56°

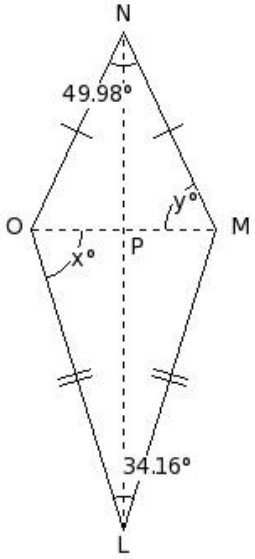
39. In the given figure, IJKL is a rectangle whose diagonals intersect at M.
Diagonal JL is produced to T and $\angle ILT = 137.49°$. Find the angles of $\triangle MJK$.



(i) M=96.98°,J=42.51°,K=40.51° (ii) M=94.98°,J=40.51°,K=44.51° (iii) M=92.98°,J=44.51°,K=42.51°

(iv) M=92.98°,J=42.51°,K=44.51° (v) M=94.98°,J=42.51°,K=42.51°

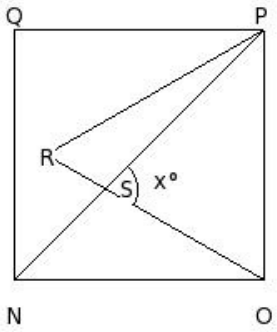
40. In the given figure, $LMNO$ is a kite whose diagonals intersect at P.
If $\angle OLM = 34.16°$ and $\angle MNO = 49.98°$, calculate $\angle POL$ and $\angle PMN$.



(i) $x=72.92°, y=65.01°$ (ii) $x=71.92°, y=64.01°$ (iii) $x=70.92°, y=63.01°$ (iv) $x=73.92°, y=66.01°$

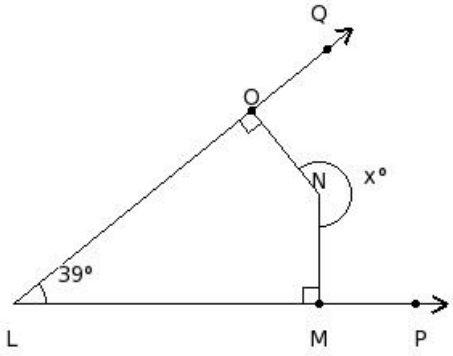
(v) $x=74.92°, y=67.01°$

41. $\triangle ROP$ is an equilateral triangle in a square $NOPQ$.
If NP and RO intersect at S, then find the value of x.



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

42. In the adjoining figure, N is a point in the interior of $\angle PLQ$.
If $NM \perp LP$ and $NO \perp LQ$ and $\angle PLQ = 39°$, find the measure of x .



(i) 218° (ii) 220° (iii) 217° (iv) 219° (v) 221°

Assignment Key

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