EduSahara™ Assignment

Name : Quadrilateral Angle Properties

Chapter : Understanding Quadrilaterals

Grade : CBSE Grade VIII

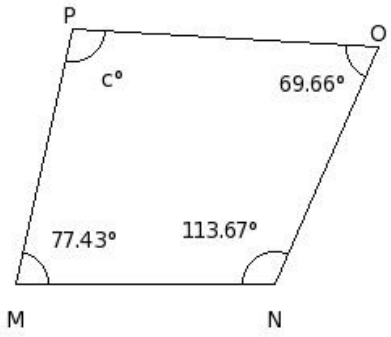
1. The measures of three angles of a quadrilateral are $55.83°, 144.83°$ and $48.74°$. Find the fourth angle

   (i) 115.6° (ii) 110.6° (iii) 140.6° (iv) 120.6° (v) 125.6°

2. Sum of the interior angles in a quadrilateral is

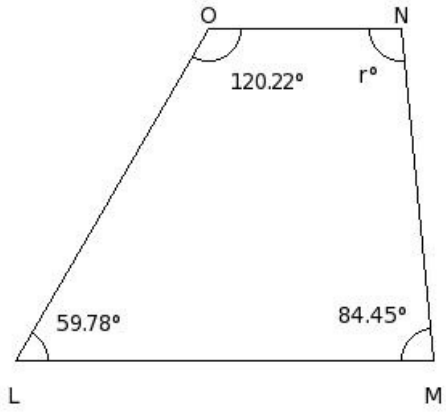
   (i) 365° (ii) 375° (iii) 390° (iv) 360° (v) 370°

3. Find the missing angle in the given quadrilateral



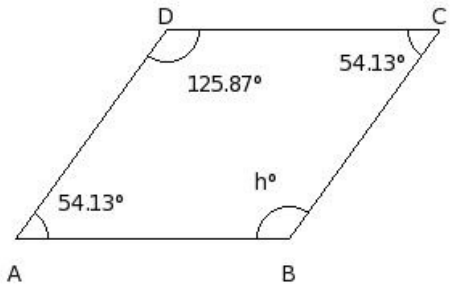
   (i) 99.24° (ii) 104.24° (iii) 129.24° (iv) 114.24° (v) 109.24°

4. Find the missing angle in the given trapezium



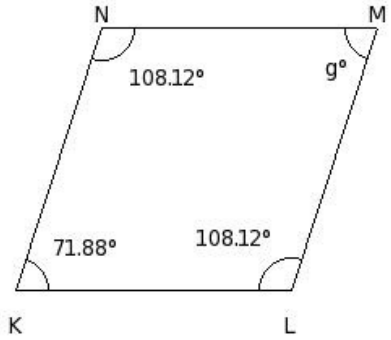
   (i) 95.55° (ii) 125.55° (iii) 100.55° (iv) 105.55° (v) 110.55°

5. Find the missing angle in the given parallelogram



   (i) 125.87° (ii) 130.87° (iii) 140.87° (iv) 135.87° (v) 155.87°

6. Find the missing angle in the given rhombus



(i) 101.88° (ii) 71.88° (iii) 81.88° (iv) 86.88° (v) 76.88°

7. In parallelogram ABCD, if ∠D = 85.9°, then find the value of ∠A

(i) 96.10° (ii) 92.10° (iii) 94.10° (iv) 93.10° (v) 95.10°

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

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

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

(i) ∠C (ii) ∠A (iii) ∠B (iv) 90°

10. MNOP is a rhombus in which ∠M = 120° .
$\overline{NP}$
is the diagonal. Then △MNO is

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

(v) an isosceles triangle

11. OPQR is a rhombus in which ∠O = 127° .
$\overline{PR}$
is the diagonal. Then △OPQ is

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

(v) a scalene triangle

12. The angles of a quadrilateral BCDE are in the ratio 7 : 17 : 12 : 36. Find the measure of each angle of the quadrilateral.

(i) B=37°,C=84°,D=58°,E=181° (ii) B=33°,C=87°,D=59°,E=181° (iii) B=36°,C=84°,D=62°,E=178°

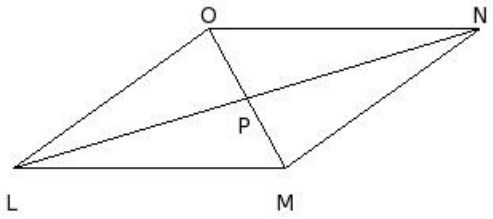
(iv) B=34°,C=83°,D=61°,E=182° (v) B=35°,C=85°,D=60°,E=180°

13. Two adjacent angles of a parallelogram GHIJ are in the ratio 3 : 9. Find the measure of each of its angles.

(i) G=45°,H=135°,I=45°,J=135° (ii) G=46°,H=134°,I=47°,J=133° (iii) G=47°,H=134°,I=43°,J=136°

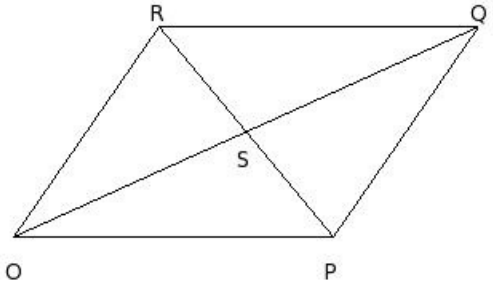
(iv) G=44°,H=133°,I=46°,J=137° (v) G=43°,H=137°,I=44°,J=136°

14. In the adjoining figure, $LMNO$ is a parallelogram in which $\angle OLN = 19.08°, \angle NLM = 16.41°, \angle OPN = 101.84°$. Calculate $\angle LMO$



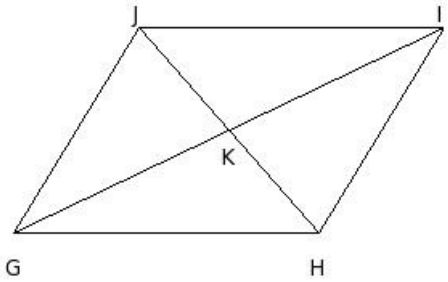
(i) 63.75° (ii) 59.75° (iii) 61.75° (iv) 60.75° (v) 62.75°

15. In the adjoining figure, $OPQR$ is a parallelogram in which $\angle ROQ = 31.07°, \angle QOP = 24.15°, \angle RSQ = 104.96°$. Calculate $\angle QRP$



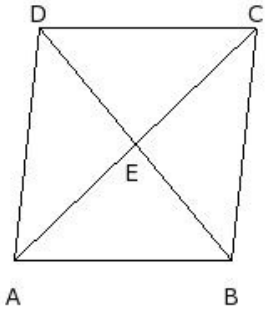
(i) 50.89° (ii) 51.89° (iii) 48.89° (iv) 52.89° (v) 49.89°

16. In the adjoining figure, $GHIJ$ is a parallelogram in which $\angle JGI = 33.11°, \angle IGH = 25.53°, \angle JKI = 105.65°$. Calculate $\angle HIG$



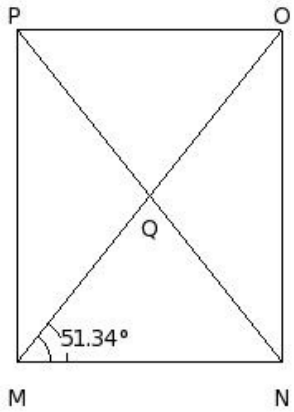
(i) 34.11° (ii) 32.11° (iii) 35.11° (iv) 31.11° (v) 33.11°

17. In the adjoining figure, $ABCD$ is a parallelogram in which $\angle DAC = 40.06°, \angle CAB = 43.78°, \angle DEC = 85.35°$. Calculate $\angle DBC$



(i) 46.29° (ii) 45.29° (iii) 43.29° (iv) 47.29° (v) 44.29°

18. In the adjoining figure, MNOP is a rectangle. If $\angle OMN = 51.34°$, find $\angle OQN$



(i) 104.68° (ii) 103.68° (iii) 101.68° (iv) 102.68° (v) 100.68°

19. Three angles of quadrilateral measure 93.82°, 80.4° and 49.87° respectively. Find the measure of the fourth angle

(i) 134.91° (ii) 137.91° (iii) 135.91° (iv) 136.91° (v) 133.91°

20. Three angles of a quadrilateral are equal and the fourth angle measure 78.47°. What is the measure of each of the equal angles?

(i) 91.84° (ii) 94.84° (iii) 92.84° (iv) 93.84° (v) 95.84°

21. Two angles of a quadrilateral are of measure 36.62° and 120.21° respectively and the other two angles are equal. Find the measure of each of the equal angles.

(i) 100.59° (ii) 101.59° (iii) 102.59° (iv) 99.59° (v) 103.59°

22. A quadrilateral has three acute angles, each measuring 66°. What is the measure of its fourth angle?

(i) 162.00° (ii) 161.00° (iii) 160.00° (iv) 163.00° (v) 164.00°

23. One angle of a parallelogram measures $E = 46.46°$.
Find the measure of each of its remaining angles.

(i) F=134.54°,G=47.46°,H=134.54° (ii) F=131.54°,G=44.46°,H=131.54°

(iii) F=135.54°,G=48.46°,H=135.54° (iv) F=132.54°,G=45.46°,H=132.54°

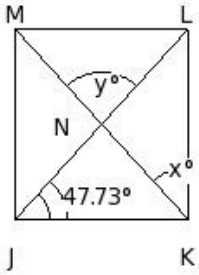
(v) F=133.54°,G=46.46°,H=133.54°

24. Two adjacent angles of a parallelogram are in the ratio 27 : 33.
Find the measure of each of its angles.

(i) A=80°,B=97°,C=82°,D=101° (ii) A=79°,B=101°,C=80°,D=100° (iii) A=82°,B=98°,C=83°,D=97°

(iv) A=83°,B=98°,C=79°,D=100° (v) A=81°,B=99°,C=81°,D=99°

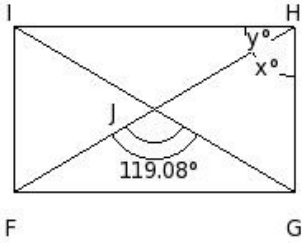
25. In the figure given below, JKLM is a rectangle. Find the values of x and y



(i) x=41.27°,y=83.54° (ii) x=44.27°,y=86.54° (iii) x=43.27°,y=85.54° (iv) x=40.27°,y=82.54°

(v) x=42.27°,y=84.54°

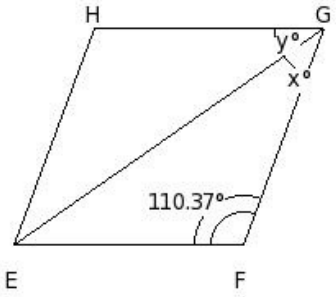
26. In the figure given below, FGHI is a rectangle. Find the values of x and y



(i) x=59.54°,y=30.46° (ii) x=60.54°,y=31.46° (iii) x=57.54°,y=28.46° (iv) x=58.54°,y=29.46°

(v) x=61.54°,y=32.46°

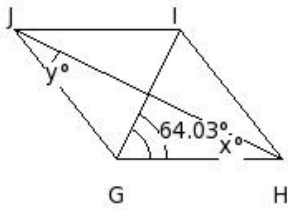
27. In the figure given below, EFGH is a rhombus. Find the values of x and y



(i) x=33.81°,y=33.81° (ii) x=35.81°,y=35.81° (iii) x=32.81°,y=32.81° (iv) x=34.81°,y=34.81°

(v) x=36.81°,y=36.81°

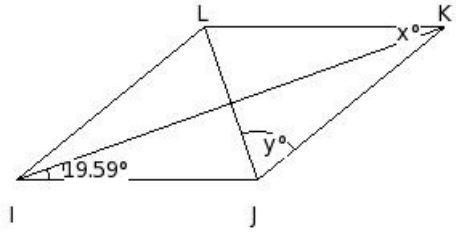
28. In the figure given below, GHIJ is a rhombus. Find the values of x and y



(i) x=27.97°,y=27.97° (ii) x=23.97°,y=23.97° (iii) x=25.97°,y=25.97° (iv) x=26.97°,y=26.97°

(v) x=24.97°,y=24.97°

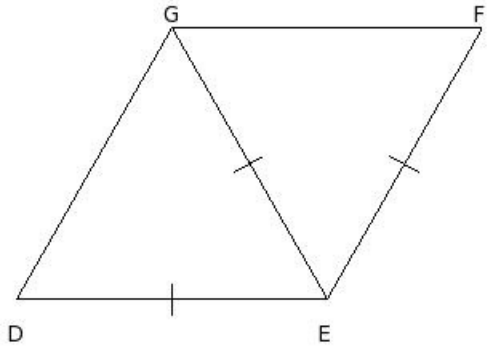
29. In the figure given below, IJKL is a rhombus. Find the values of x and y



(i) x=18.59°,y=69.41° (ii) x=17.59°,y=68.41° (iii) x=20.59°,y=71.41° (iv) x=21.59°,y=72.41°

(v) x=19.59°,y=70.41°

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

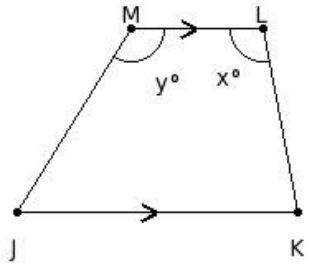


(i) D=61°,E=119°,F=62°,G=118° (ii) D=60°,E=120°,F=60°,G=120°

(iii) D=62°,E=119°,F=58°,G=121° (iv) D=59°,E=118°,F=61°,G=122°

(v) D=58°,E=122°,F=59°,G=121°

31. In the adjoining figure, JKLM is a trapezium in which $\overline{JK} \parallel \overline{LM}$.
If x = 100.71° and y = 121.87°, find the measures of ∠J and ∠K.

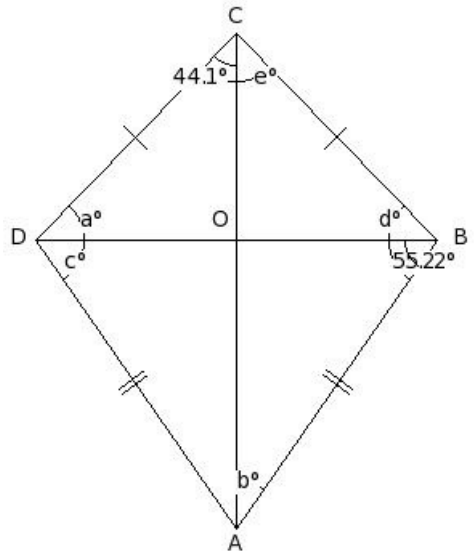


(i) J=60.13°,K=81.29° (ii) J=56.13°,K=77.29° (iii) J=57.13°,K=78.29° (iv) J=59.13°,K=80.29°

(v) J=58.13°,K=79.29°

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 $\angle OCD = 44.1°$ and $\angle ABO = 55.22°$, find the measure of each of the angles marked a,b,c,d and e.



(i) a = 45.9° , b = 34.78° , c = 55.22° , d = 45.9° , e = 44.1°

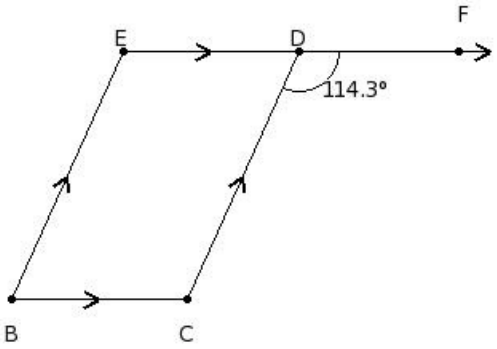
(ii) a = 45.9° , b = 35.78° , c = 54.22° , d = 47.9° , e = 44.1°

(iii) a = 45.9° , b = 35.78° , c = 55.22° , d = 45.9° , e = 44.1°

(iv) a = 45.9° , b = 35.78° , c = 54.22° , d = 47.9° , e = 42.1°

(v) a = 45.9° , b = 35.78° , c = 54.22° , d = 45.9° , e = 44.1°

33. In the adjoining figure, side DE of parallelogram BCDE has been produced to F. If $\angle CDF = 114.3°$, find the measure of each angle of the parallelogram.

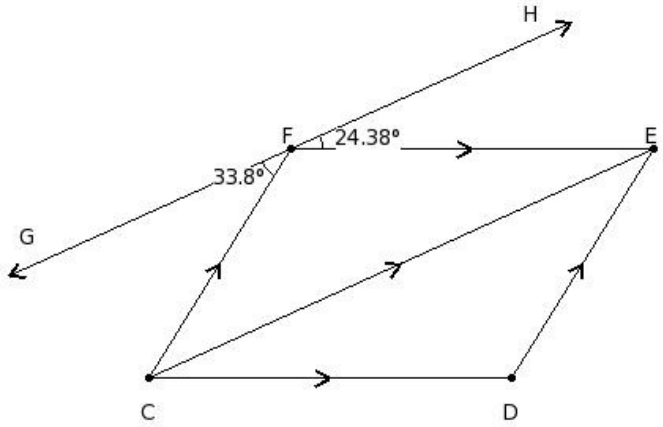


(i) B=65.7°,C=114.3°,D=65.7°,E=114.3° (ii) B=66.7°,C=113.3°,D=67.7°,E=112.3°

(iii) B=64.7°,C=112.3°,D=66.7°,E=116.3° (iv) B=67.7°,C=113.3°,D=63.7°,E=115.3°

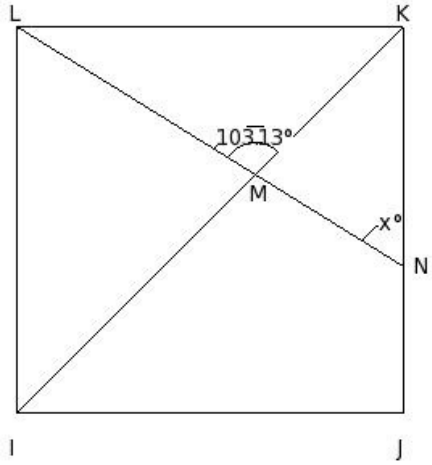
(v) B=63.7°,C=116.3°,D=64.7°,E=115.3°

34. In the adjoining figure, CDEF is a parallelogram and GH is such that $\overline{GH} \parallel \overline{CE}$
If $\angle CFG = 33.8°$ and $\angle EFH = 24.38°$, find the measure of $\angle EFC$.



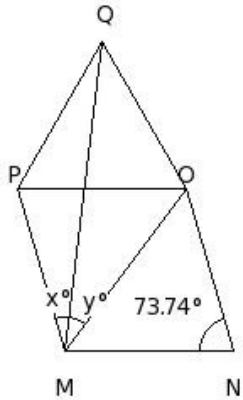
(i) 123.83° (ii) 120.83° (iii) 122.83° (iv) 121.83° (v) 119.83°

35. In the adjoining figure, IJKL is a square. A line segment LN cuts the side JK at N and the diagonal IK at M such that $\angle LMK = 103.13°$ and $\angle MNK = x°$. Find the value of x .



(i) 59.13° (ii) 56.13° (iii) 58.13° (iv) 57.13° (v) 60.13°

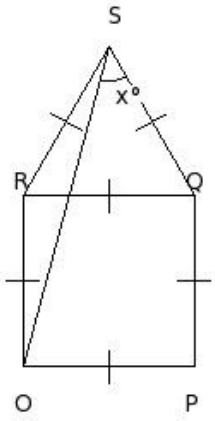
36. In the adjoining figure, MNOP is a rhombus and $\triangle QPO$ is an equilateral triangle. Q and M are on opposite sides of OP. If $\angle MNO = 73.74°$, find the values of x and y .



(i) x=21.13°,y=28° (ii) x=24.13°,y=31° (iii) x=22.13°,y=29° (iv) x=23.13°,y=30°

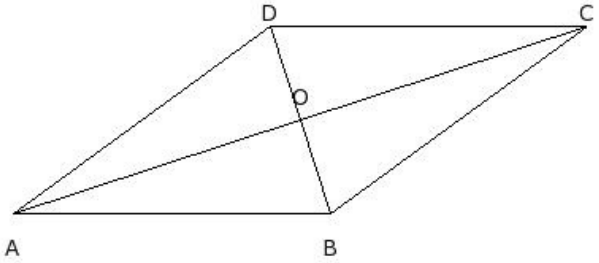
(v) x=25.13°,y=32°

37. In the adjoining figure, equilateral △RQS surmounts square OPQR. If QSO = x°, find the value of x.



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

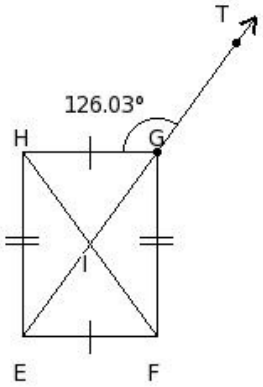
38. In the adjoining figure, ABCD is a rhombus whose diagonals intersect at O.
If ∠OAB : ∠ABO = 2 : 8, find the angles of △OAB.



(i) O=88°,A=18°,B=74° (ii) O=90°,A=18°,B=72° (iii) O=88°,A=20°,B=72° (iv) O=92°,A=18°,B=70°

(v) O=90°,A=16°,B=74°

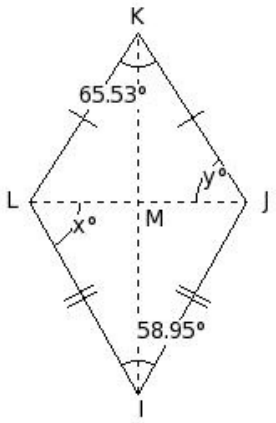
39. In the given figure, EFGH is a rectangle whose diagonals intersect at I.
Diagonal EG is produced to T and ∠HGT = 126.03°. Find the angles of △IFG.



(i) I=107.94°,F=36.03°,G=36.03° (ii) I=105.94°,F=36.03°,G=38.03° (iii) I=105.94°,F=38.03°,G=36.03°

(iv) I=109.94°,F=36.03°,G=34.03° (v) I=107.94°,F=34.03°,G=38.03°

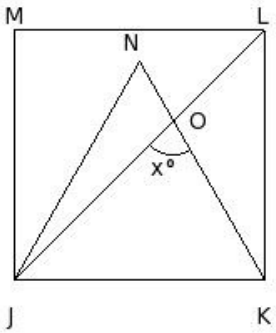
40. In the given figure, IJKL is a kite whose diagonals intersect at M.
If $\angle LIJ = 58.95°$ and $\angle JKL = 65.53°$, calculate $\angle MLI$ and $\angle MJK$.



(i) $x=58.53°, y=55.23°$ (ii) $x=62.53°, y=59.23°$ (iii) $x=61.53°, y=58.23°$ (iv) $x=60.53°, y=57.23°$

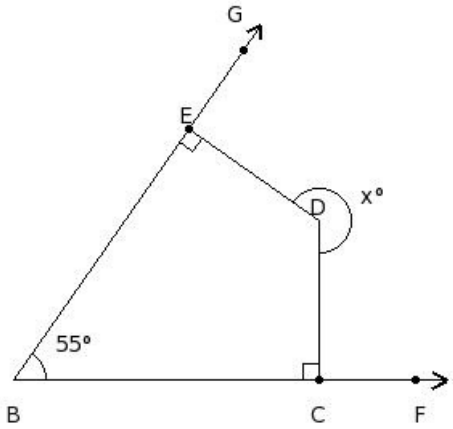
(v) $x=59.53°, y=56.23°$

41. $\triangle NJK$ is an equilateral triangle in a square JKLM.
If JL and KN intersect at O, then find the value of x.



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

42. In the adjoining figure, D is a point in the interior of $\angle FBG$.
If $DC \perp BF$ and $DE \perp BG$ and $\angle FBG = 55°$, find the measure of x .



(i) 235° (ii) 236° (iii) 237° (iv) 234° (v) 233°

Assignment Key

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