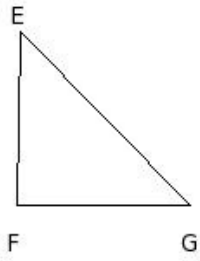
EduSahara™ Assignment

Name : Triangle Concepts

Chapter : Triangles

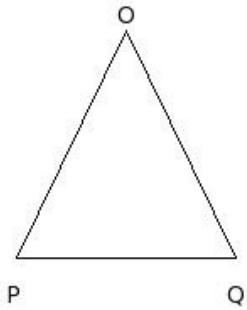
Grade : ICSE Grade VIII

1. Identify the figure below



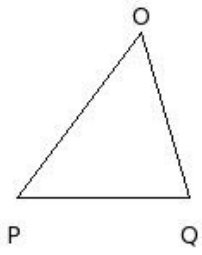
(i) quadrilateral (ii) circle (iii) nonagon (iv) triangle (v) hexagon

2. The side opposite to the vertex O



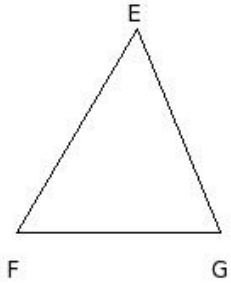
(i) $\overline{PQ}$ (ii) $\overline{RP}$ (iii) $\overline{OS}$ (iv) $\overline{QO}$ (v) $\overline{OP}$

3. The side opposite to the vertex P



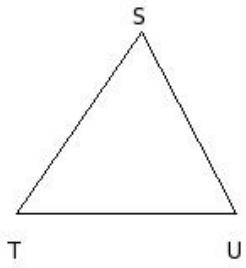
(i) $\overline{PQ}$ (ii) $\overline{OS}$ (iii) $\overline{OP}$ (iv) $\overline{RP}$ (v) $\overline{QO}$

4. The side opposite to the vertex G



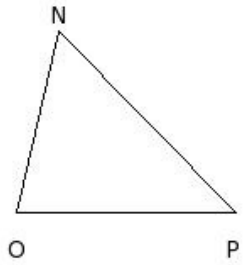
(i) $\overline{EI}$ (ii) $\overline{EF}$ (iii) $\overline{FG}$ (iv) $\overline{HF}$ (v) $\overline{GE}$

5. The vertex opposite to the side $\overline{TU}$



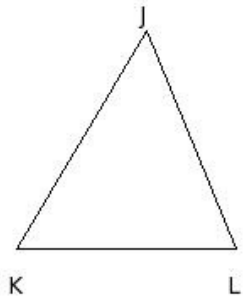
(i) T (ii) $\overline{UV}$ (iii) S (iv) W

6. The vertex opposite to the side $\overline{PN}$



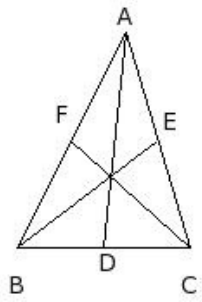
(i) N (ii) $\overline{PQ}$ (iii) R (iv) O

7. The vertex opposite to the side $\overline{JK}$



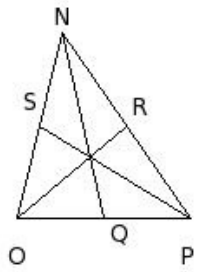
(i) J (ii) L (iii) $\overline{LM}$ (iv) K

8. The median corresponding to the side $\overline{BC}$



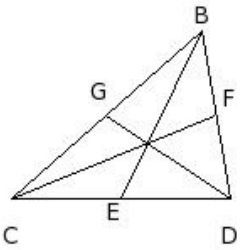
(i) $\overline{AB}$ (ii) $\overline{CF}$ (iii) $\overline{BE}$ (iv) $\overline{AD}$ (v) $\overline{AE}$

9. The median corresponding to the side $\overline{PN}$



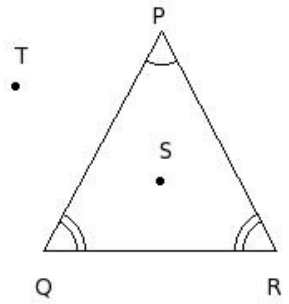
(i) $\overline{OR}$ (ii) $\overline{NR}$ (iii) $\overline{NO}$ (iv) $\overline{PS}$ (v) $\overline{NQ}$

10. The median corresponding to the side $\overline{BC}$



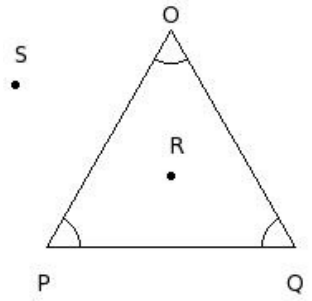
(i) $\overline{BC}$ (ii) $\overline{CF}$ (iii) $\overline{BF}$ (iv) $\overline{BE}$ (v) $\overline{DG}$

11. The sides of the triangle are



(i) $\overline{RT}, \overline{TQ}, \overline{QR}$ (ii) $\overline{QS}, \overline{SP}, \overline{PQ}$ (iii) $\overline{ST}, \overline{TR}, \overline{RS}$ (iv) $\overline{QR}, \overline{RP}, \overline{PQ}$ (v) $\overline{RS}, \overline{SQ}, \overline{QR}$

12. The name of the triangle is



(i) $\triangle OPQ$ (ii) $\triangle QRS$ (iii) $\triangle PQS$ (iv) $\triangle OPR$ (v) $\triangle PQR$

13. Which of the following are measures of an equilateral triangle ?

(i) OP = 15 cm , PQ = 15 cm , QO = 15 cm (ii) OP = 14 cm , PQ = 14 cm , QO = 19.8 cm

(iii) OP = 14 cm , PQ = 11 cm , QO = 14 cm (iv) OP = 15 cm , PQ = 13 cm , QO = 11 cm

(v) OP = 14 cm , PQ = 12 cm , QO = 18.44 cm

14. Which of the following are measures of an isosceles triangle ?

(i) CD = 13 cm , DE = 10 cm , EC = 14 cm (ii) CD = 11 cm , DE = 15 cm , EC = 18.6 cm

(iii) CD = 14 cm , DE = 13 cm , EC = 15 cm (iv) CD = 11 cm , DE = 12 cm , EC = 11 cm

(v) CD = 14 cm , DE = 14 cm , EC = 14 cm

15. Which of the following are measures of a scalene triangle ?

(i) HI = 11 cm , IJ = 15 cm , JH = 11 cm (ii) HI = 13 cm , IJ = 13 cm , JH = 13 cm

(iii) HI = 15 cm , IJ = 14 cm , JH = 12 cm (iv) HI = 11 cm , IJ = 11 cm , JH = 15.56 cm

(v) HI = 10 cm , IJ = 14 cm , JH = 10 cm

16. Which of the following are measures of a right angled triangle ?

(i) FG = 14 cm , GH = 14 cm , HF = 14 cm (ii) FG = 12 cm , GH = 17 cm , HF = 11 cm

(iii) FG = 12 cm , GH = 15 cm , HF = 19.21 cm (iv) FG = 12 cm , GH = 11 cm , HF = 12 cm

(v) FG = 15 cm , GH = 13 cm , HF = 12 cm

17. Which of the following are measures of an isosceles right angled triangle ?

(i) GH = 12 cm , HI = 22 cm , IG = 12 cm (ii) GH = 12 cm , HI = 11 cm , IG = 14 cm

(iii) GH = 10 cm , HI = 10 cm , IG = 10 cm (iv) GH = 13 cm , HI = 13 cm , IG = 18.38 cm

(v) GH = 10 cm , HI = 12 cm , IG = 15 cm

18. Which of the following are measures of an acute angled triangle ?

(i) PQ = 14 cm , QR = 19 cm , RP = 12 cm (ii) PQ = 11 cm , QR = 11 cm , RP = 15.56 cm

(iii) PQ = 13 cm , QR = 12 cm , RP = 14 cm (iv) PQ = 13 cm , QR = 21 cm , RP = 12 cm

(v) PQ = 14 cm , QR = 15 cm , RP = 20.52 cm

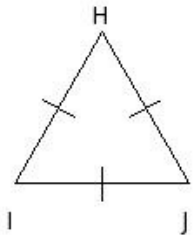
19. Which of the following are measures of an obtuse angled triangle ?

(i) GH = 12 cm , HI = 11 cm , IG = 13 cm (ii) GH = 13 cm , HI = 10 cm , IG = 15 cm

(iii) GH = 12 cm , HI = 12 cm , IG = 16.97 cm (iv) GH = 13 cm , HI = 22 cm , IG = 14 cm

(v) GH = 15 cm , HI = 13 cm , IG = 19.85 cm

20. Which of the following are measures of an equilateral triangle ?

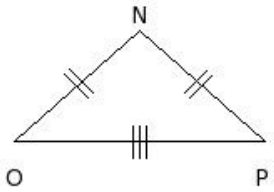


(i) HI = 14 cm , IJ = 15 cm , JH = 20.52 cm (ii) HI = 10 cm , IJ = 10 cm , JH = 10 cm

(iii) HI = 10 cm , IJ = 13 cm , JH = 10 cm (iv) HI = 10 cm , IJ = 11 cm , JH = 13 cm

(v) HI = 10 cm , IJ = 10 cm , JH = 14.14 cm

21. Which of the following are measures of an isosceles triangle ?

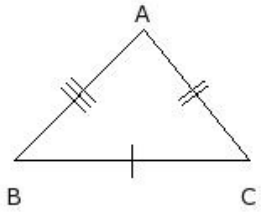


(i) NO = 12 cm , OP = 12 cm , PN = 12 cm (ii) NO = 14 cm , OP = 11 cm , PN = 10 cm

(iii) NO = 15 cm , OP = 12 cm , PN = 19.21 cm (iv) NO = 10 cm , OP = 15 cm , PN = 13 cm

(v) NO = 10 cm , OP = 15 cm , PN = 10 cm

22. Which of the following are measures of a scalene triangle ?

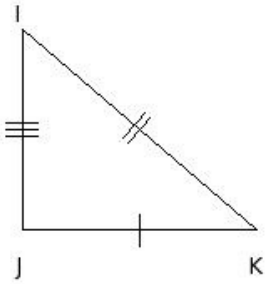


(i) AB = 11 cm , BC = 14 cm , CA = 10 cm (ii) AB = 14 cm , BC = 14 cm , CA = 19.8 cm

(iii) AB = 15 cm , BC = 12 cm , CA = 15 cm (iv) AB = 11 cm , BC = 13 cm , CA = 11 cm

(v) AB = 15 cm , BC = 15 cm , CA = 15 cm

23. Which of the following are measures of a right angled triangle ?

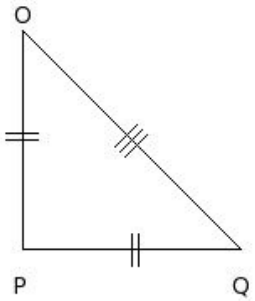


(i) IJ = 10 cm , JK = 10 cm , KI = 12 cm (ii) IJ = 12 cm , JK = 14 cm , KI = 18.44 cm

(iii) IJ = 15 cm , JK = 24 cm , KI = 15 cm (iv) IJ = 13 cm , JK = 12 cm , KI = 10 cm

(v) IJ = 11 cm , JK = 11 cm , KI = 11 cm

24. Which of the following are measures of an isosceles right angled triangle ?

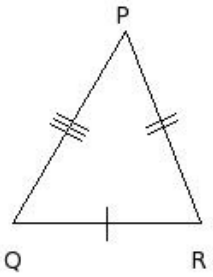


(i) OP = 13 cm , PQ = 15 cm , QO = 12 cm (ii) OP = 13 cm , PQ = 13 cm , QO = 13 cm

(iii) OP = 15 cm , PQ = 11 cm , QO = 13 cm (iv) OP = 13 cm , PQ = 13 cm , QO = 18.38 cm

(v) OP = 15 cm , PQ = 28 cm , QO = 15 cm

25. Which of the following are measures of an acute angled triangle ?

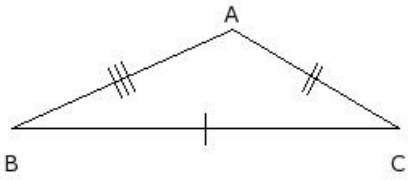


(i) PQ = 10 cm , QR = 21 cm , RP = 14 cm (ii) PQ = 15 cm , QR = 11 cm , RP = 18.6 cm

(iii) PQ = 11 cm , QR = 22 cm , RP = 13 cm (iv) PQ = 15 cm , QR = 15 cm , RP = 21.21 cm

(v) PQ = 13 cm , QR = 11 cm , RP = 12 cm

26. Which of the following are measures of an obtuse angled triangle ?



(i) AB = 15 cm , BC = 24 cm , CA = 12 cm (ii) AB = 12 cm , BC = 13 cm , CA = 15 cm

(iii) AB = 14 cm , BC = 12 cm , CA = 15 cm (iv) AB = 11 cm , BC = 11 cm , CA = 15.56 cm

(v) AB = 10 cm , BC = 15 cm , CA = 18.03 cm

27. Which of the following are measures of an equilateral triangle ?

(i) $\angle O = 47.73°$, $\angle P = 90°$, $\angle Q = 42.27°$ (ii) $\angle O = 45°$, $\angle P = 90°$, $\angle Q = 45°$

(iii) $\angle O = 48.37°$, $\angle P = 76.33°$, $\angle Q = 55.3°$ (iv) $\angle O = 97.18°$, $\angle P = 41.41°$, $\angle Q = 41.41°$

(v) $\angle O = 60°$, $\angle P = 60°$, $\angle Q = 60°$

28. Which of the following are measures of an isosceles triangle ?

(i) $\angle N = 38.94°$, $\angle O = 70.53°$, $\angle P = 70.53°$ (ii) $\angle N = 60°$, $\angle O = 60°$, $\angle P = 60°$

(iii) $\angle N = 67.97°$, $\angle O = 52.62°$, $\angle P = 59.41°$ (iv) $\angle N = 38.66°$, $\angle O = 90°$, $\angle P = 51.34°$

(v) $\angle N = 45.21°$, $\angle O = 83.47°$, $\angle P = 51.32°$

29. Which of the following are measures of a scalene triangle ?

(i) $\angle P = 45°$, $\angle Q = 90°$, $\angle R = 45°$ (ii) $\angle P = 60°$, $\angle Q = 60°$, $\angle R = 60°$

(iii) $\angle P = 45.21°$, $\angle Q = 51.32°$, $\angle R = 83.47°$ (iv) $\angle P = 88.86°$, $\angle Q = 45.57°$, $\angle R = 45.57°$

(v) $\angle P = 45.24°$, $\angle Q = 67.38°$, $\angle R = 67.38°$

30. Which of the following are measures of a right angled triangle ?

(i) $\angle K = 50.19°$, $\angle L = 90°$, $\angle M = 39.81°$ (ii) $\angle K = 134.62°$, $\angle L = 24.53°$, $\angle M = 20.85°$

(iii) $\angle K = 61.28°$, $\angle L = 70.81°$, $\angle M = 47.91°$ (iv) $\angle K = 60°$, $\angle L = 60°$, $\angle M = 60°$

(v) $\angle K = 73.69°$, $\angle L = 43.28°$, $\angle M = 63.03°$

31. Which of the following are measures of an isosceles right angled triangle ?

(i) $\angle G = 60°$, $\angle H = 60°$, $\angle I = 60°$ (ii) $\angle G = 120.14°$, $\angle H = 29.93°$, $\angle I = 29.93°$

(iii) $\angle G = 45°$, $\angle H = 90°$, $\angle I = 45°$ (iv) $\angle G = 59.49°$, $\angle H = 53.13°$, $\angle I = 67.38°$

(v) $\angle G = 59.3°$, $\angle H = 52.02°$, $\angle I = 68.68°$

32. Which of the following are measures of an acute angled triangle ?

(i) $\angle J = 40.6°$, $\angle K = 90°$, $\angle L = 49.4°$ (ii) $\angle J = 55.3°$, $\angle K = 48.37°$, $\angle L = 76.33°$

(iii) $\angle J = 94.34°$, $\angle K = 42.83°$, $\angle L = 42.83°$ (iv) $\angle J = 105.64°$, $\angle K = 42.38°$, $\angle L = 31.98°$

(v) $\angle J = 45°$, $\angle K = 90°$, $\angle L = 45°$

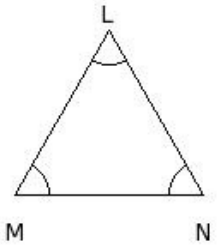
33. Which of the following are measures of an obtuse angled triangle ?

(i) $\angle P = 66.42°$, $\angle Q = 66.42°$, $\angle R = 47.16°$ (ii) $\angle P = 37.57°$, $\angle Q = 90°$, $\angle R = 52.43°$

(iii) $\angle P = 45°$, $\angle Q = 90°$, $\angle R = 45°$ (iv) $\angle P = 54.56°$, $\angle Q = 62.72°$, $\angle R = 62.72°$

(v) $\angle P = 122.84°$, $\angle Q = 24.84°$, $\angle R = 32.32°$

34. Which of the following are measures of an equilateral triangle ?

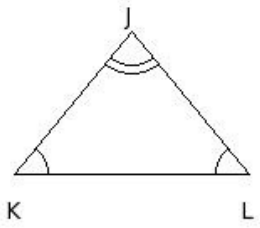


(i) $\angle L = 45.24°$, $\angle M = 67.38°$, $\angle N = 67.38°$ (ii) $\angle L = 52.43°$, $\angle M = 90°$, $\angle N = 37.57°$

(iii) $\angle L = 45°$, $\angle M = 90°$, $\angle N = 45°$ (iv) $\angle L = 58.67°$, $\angle M = 80.25°$, $\angle N = 41.08°$

(v) $\angle L = 60°$, $\angle M = 60°$, $\angle N = 60°$

35. Which of the following are measures of an isosceles triangle ?

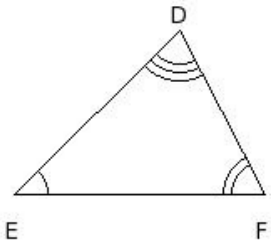


(i) $\angle J = 44.42°$, $\angle K = 57.12°$, $\angle L = 78.46°$ (ii) $\angle J = 73.62°$, $\angle K = 56.25°$, $\angle L = 50.13°$

(iii) $\angle J = 79.04°$, $\angle K = 50.48°$, $\angle L = 50.48°$ (iv) $\angle J = 60°$, $\angle K = 60°$, $\angle L = 60°$

(v) $\angle J = 47.12°$, $\angle K = 90°$, $\angle L = 42.88°$

36. Which of the following are measures of a scalene triangle ?

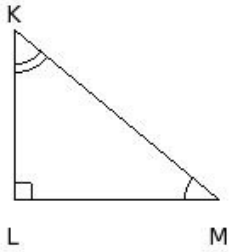


(i) $\angle D = 65.6°$, $\angle E = 57.2°$, $\angle F = 57.2°$ (ii) $\angle D = 45°$, $\angle E = 90°$, $\angle F = 45°$

(iii) $\angle D = 60°$, $\angle E = 60°$, $\angle F = 60°$ (iv) $\angle D = 72.62°$, $\angle E = 44.42°$, $\angle F = 62.96°$

(v) $\angle D = 71.38°$, $\angle E = 54.31°$, $\angle F = 54.31°$

37. Which of the following are measures of a right angled triangle ?

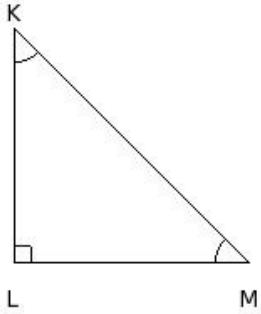


(i) $\angle K = 54.31°$, $\angle L = 54.31°$, $\angle M = 71.38°$ (ii) $\angle K = 60°$, $\angle L = 60°$, $\angle M = 60°$

(iii) $\angle K = 50.19°$, $\angle L = 90°$, $\angle M = 39.81°$ (iv) $\angle K = 52.62°$, $\angle L = 67.97°$, $\angle M = 59.41°$

(v) $\angle K = 91.3°$, $\angle L = 51.04°$, $\angle M = 37.66°$

38. Which of the following are measures of an isosceles right angled triangle ?

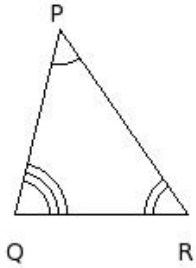


(i) $\angle K = 60°$, $\angle L = 60°$, $\angle M = 60°$ (ii) $\angle K = 49.32°$, $\angle L = 74.85°$, $\angle M = 55.83°$

(iii) $\angle K = 45°$, $\angle L = 90°$, $\angle M = 45°$ (iv) $\angle K = 112.75°$, $\angle L = 41.2°$, $\angle M = 26.05°$

(v) $\angle K = 50.13°$, $\angle L = 73.62°$, $\angle M = 56.25°$

39. Which of the following are measures of an acute angled triangle ?

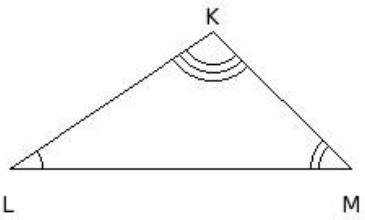


(i) $\angle P = 48.37°$, $\angle Q = 76.33°$, $\angle R = 55.3°$ (ii) $\angle P = 122.01°$, $\angle Q = 22.67°$, $\angle R = 35.32°$

(iii) $\angle P = 56.31°$, $\angle Q = 90°$, $\angle R = 33.69°$ (iv) $\angle P = 45°$, $\angle Q = 90°$, $\angle R = 45°$

(v) $\angle P = 124.4°$, $\angle Q = 27.8°$, $\angle R = 27.8°$

40. Which of the following are measures of an obtuse angled triangle ?



(i) $\angle K = 60°$, $\angle L = 60°$, $\angle M = 60°$ (ii) $\angle K = 61.26°$, $\angle L = 46.95°$, $\angle M = 71.79°$

(iii) $\angle K = 101.53°$, $\angle L = 34.05°$, $\angle M = 44.42°$ (iv) $\angle K = 45°$, $\angle L = 90°$, $\angle M = 45°$

(v) $\angle K = 51.84°$, $\angle L = 90°$, $\angle M = 38.16°$

41. Find the measures of the three sides suitable to form a triangle?

(i) CD = 5 cm , DE = 6 cm , EC = 19 cm (ii) CD = 8 cm , DE = 16 cm , EC = 5 cm

(iii) CD = 12 cm , DE = 12 cm , EC = 15 cm (iv) CD = 6 cm , DE = 7 cm , EC = 20 cm

(v) CD = 8 cm , DE = 20 cm , EC = 5 cm

42. Find the measures of the three angles suitable to form a triangle?

(i) $\angle P = 93.30°$, $\angle Q = 115.30°$, $\angle R = 34.40°$ (ii) $\angle P = 85.10°$, $\angle Q = 67.50°$, $\angle R = 83.70°$

(iii) $\angle P = 73.90°$, $\angle Q = 98.70°$, $\angle R = 58.90°$ (iv) $\angle P = 47.91°$, $\angle Q = 61.28°$, $\angle R = 70.81°$

(v) $\angle P = 112.60°$, $\angle Q = 58.90°$, $\angle R = 80.40°$

43. The point of intersection of the altitudes of a triangle is called

(i) orthocentre (ii) excentre (iii) incentre (iv) circumcentre (v) median

44. The point of intersection of the perpendicular bisectors of the sides of a triangle is called

(i) centroid (ii) orthocentre (iii) altitude (iv) incentre (v) circumcentre

45. The point of intersection of the bisectors of the interior angles of a triangle is called

(i) median (ii) circumcentre (iii) incentre (iv) excentre (v) altitude

46. The point of intersection of the bisectors of the interior angle and the two exterior opposite angles of a triangle is called

(i) excentre (ii) altitude (iii) incentre (iv) centroid (v) orthocentre

47. The point of intersection of the medians of a triangle is called

(i) circumcentre (ii) incentre (iii) excentre (iv) centroid (v) median

48. The line joining each vertex to the mid-point of the opposite side of a triangle is called

(i) excentre (ii) median (iii) circumcentre (iv) incentre (v) orthocentre

49. The perpendicular drawn from each vertex to the opposite side of a triangle is called

(i) median (ii) altitude (iii) orthocentre (iv) excentre (v) incentre

50. Which of the following may lie outside or on the triangle?

a) excentre
b) orthocentre
c) circumcentre
d) incentre
e) centroid

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

51. Sum of the interior angles in a triangle is

(i) 180° (ii) 190° (iii) 210° (iv) 195° (v) 185°

52. How many diagonals does a triangle have?

(i) 1 (ii) 4 (iii) 0 (iv) 3 (v) 2

53. Two angles of a triangle measure 50° and 66° respectively. Find the measure of the third angle of the triangle

(i) 65° (ii) 64° (iii) 66° (iv) 62° (v) 63°

Assignment Key

1) (iv)	2) (i)	3) (v)	4) (ii)	5) (iii)	6) (iv)
7) (ii)	8) (iv)	9) (i)	10) (v)	11) (iv)	12) (i)
13) (i)	14) (iv)	15) (iii)	16) (iii)	17) (iv)	18) (iii)
19) (iv)	20) (ii)	21) (v)	22) (i)	23) (ii)	24) (iv)
25) (v)	26) (i)	27) (v)	28) (i)	29) (iii)	30) (i)
31) (iii)	32) (ii)	33) (v)	34) (v)	35) (iii)	36) (iv)
37) (iii)	38) (iii)	39) (i)	40) (iii)	41) (iii)	42) (iv)
43) (i)	44) (v)	45) (iii)	46) (i)	47) (iv)	48) (ii)
49) (ii)	50) (iii)	51) (i)	52) (iii)	53) (ii)	