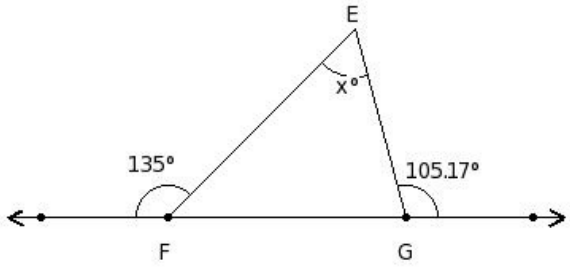
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : The Triangle and its Properties

Grade : CBSE Grade VII

1. Calculate the value of the lettered angle in the following figure



(i) x=61.17° (ii) x=58.17° (iii) x=59.17° (iv) x=60.17° (v) x=62.17°

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

(i) ∠D = 88.86° , ∠E = 45.57° , ∠F = 45.57° (ii) ∠D = 68.68° , ∠E = 59.3° , ∠F = 52.02°

(iii) ∠D = 42.51° , ∠E = 90° , ∠F = 47.49° (iv) ∠D = 45° , ∠E = 90° , ∠F = 45°

(v) ∠D = 60° , ∠E = 60° , ∠F = 60°

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

(i) ∠L = 45° , ∠M = 90° , ∠N = 45° (ii) ∠L = 70.46° , ∠M = 54.77° , ∠N = 54.77°

(iii) ∠L = 73.74° , ∠M = 53.13° , ∠N = 53.13° (iv) ∠L = 73.69° , ∠M = 43.28° , ∠N = 63.03°

(v) ∠L = 60° , ∠M = 60° , ∠N = 60°

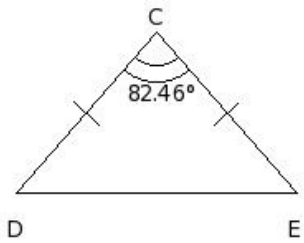
4. Find the measures of the three angles suitable to form a triangle?

(i) ∠F = 70.80° , ∠G = 87.60° , ∠H = 93.10° (ii) ∠F = 70.53° , ∠G = 70.53° , ∠H = 38.94°

(iii) ∠F = 84.20° , ∠G = 77.60° , ∠H = 43.10° (iv) ∠F = 35.30° , ∠G = 55.90° , ∠H = 54.80°

(v) ∠F = 50.80° , ∠G = 42.20° , ∠H = 59.30°

5. In the given triangle, ∠C = 82.46°. Find the measure of ∠D and ∠E



(i) ∠D = ∠E = 49.77° (ii) ∠D = ∠E = 48.77° (iii) ∠D = ∠E = 46.77° (iv) ∠D = ∠E = 50.77°

(v) ∠D = ∠E = 47.77°

6. In an isosceles triangle, each base angle is four times its vertical angle. Find each angle of the triangle.

(i) A=22°,B=80°,C=78° (ii) A=20°,B=78°,C=82° (iii) A=18°,B=82°,C=80° (iv) A=18°,B=80°,C=82°

(v) A=20°,B=80°,C=80°

7. One of the two equal angles of an isosceles triangle measures 64°. Find the measure of each angle of the triangle.

(i) A=62°,B=64°,C=54° (ii) A=64°,B=62°,C=54° (iii) A=64°,B=64°,C=52° (iv) A=66°,B=64°,C=50°

(v) A=62°,B=66°,C=52°

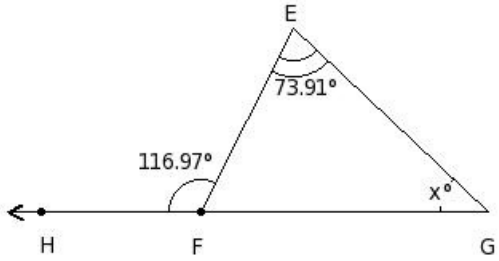
8. Which of the following are measures of an acute angled triangle ?

(i) GH = 12 cm , HI = 12 cm , IG = 16.97 cm (ii) GH = 14 cm , HI = 12 cm , IG = 18.44 cm

(iii) GH = 15 cm , HI = 27 cm , IG = 14 cm (iv) GH = 14 cm , HI = 24 cm , IG = 15 cm

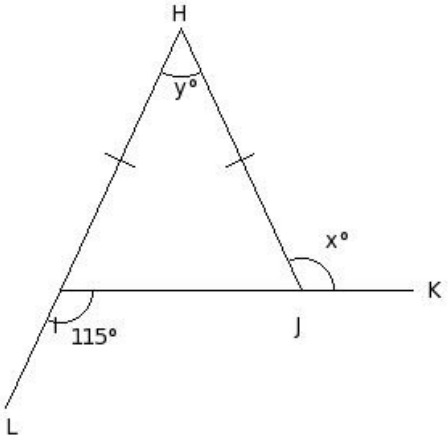
(v) GH = 15 cm , HI = 15 cm , IG = 11 cm

9. Calculate the value of x in the following figure



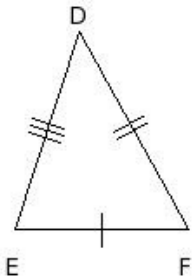
(i) x=44.06° (ii) x=45.06° (iii) x=41.06° (iv) x=43.06° (v) x=42.06°

10. Find the unknown marked angles in the following figure



(i) x=116°,y=51° (ii) x=117°,y=52° (iii) x=115°,y=50° (iv) x=114°,y=49° (v) x=113°,y=48°

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

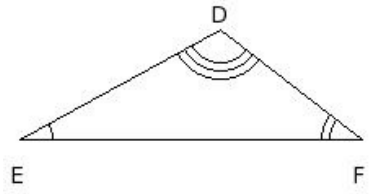


(i) DE = 11 cm , EF = 19 cm , FD = 10 cm (ii) DE = 10 cm , EF = 20 cm , FD = 12 cm

(iii) DE = 13 cm , EF = 13 cm , FD = 18.38 cm (iv) DE = 11 cm , EF = 14 cm , FD = 17.8 cm

(v) DE = 12 cm , EF = 10 cm , FD = 13 cm

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



(i) ∠D = 40.24° , ∠E = 90° , ∠F = 49.76° (ii) ∠D = 65.6° , ∠E = 57.2° , ∠F = 57.2°

(iii) ∠D = 113.74° , ∠E = 28.65° , ∠F = 37.61° (iv) ∠D = 64.63° , ∠E = 64.62° , ∠F = 50.75°

(v) ∠D = 45° , ∠E = 90° , ∠F = 45°

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

(i) BC = 13 cm , CD = 10 cm , DB = 13 cm (ii) BC = 10 cm , CD = 10 cm , DB = 14.14 cm

(iii) BC = 15 cm , CD = 12 cm , DB = 10 cm (iv) BC = 14 cm , CD = 14 cm , DB = 14 cm

(v) BC = 12 cm , CD = 13 cm , DB = 17.69 cm

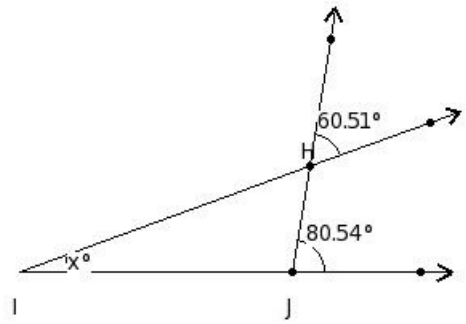
14. Which of the following are measures of a right angled triangle ?

(i) LM = 13 cm , MN = 15 cm , NL = 14 cm (ii) LM = 11 cm , MN = 21 cm , NL = 15 cm

(iii) LM = 13 cm , MN = 13 cm , NL = 13 cm (iv) LM = 15 cm , MN = 13 cm , NL = 14 cm

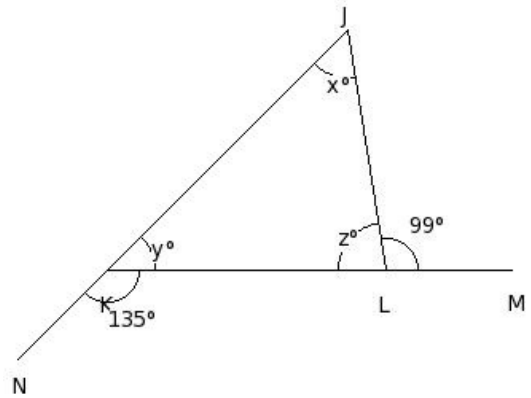
(v) LM = 15 cm , MN = 12 cm , NL = 19.21 cm

15. Calculate the value of the lettered angle in the following figure



(i) x=22.03° (ii) x=19.03° (iii) x=18.03° (iv) x=20.03° (v) x=21.03°

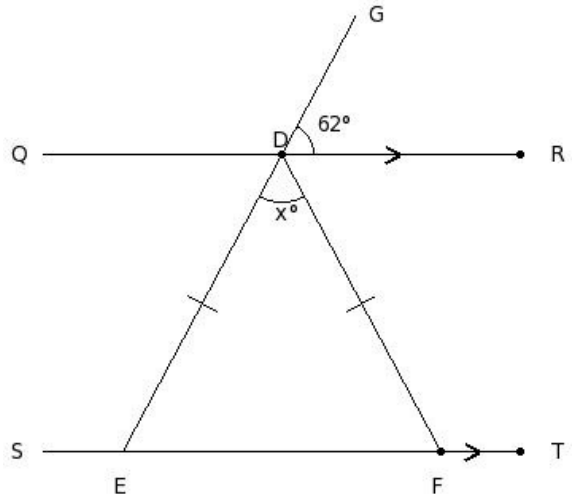
16. In the following figure, two sides of a triangle have been produced. Find all the angles of the triangle.



(i) x=54°,y=45°,z=81° (ii) x=52°,y=47°,z=81° (iii) x=54°,y=43°,z=83° (iv) x=52°,y=45°,z=83°

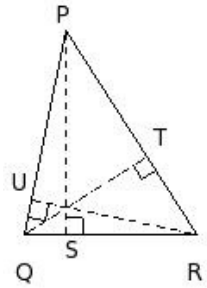
(v) x=56°,y=45°,z=79°

17. In the given figure, QR ∥ ST, ∠GDR = 62° and DE = FD. Find the measure of x.



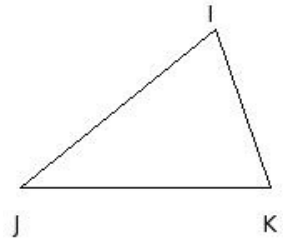
(i) x=57° (ii) x=54° (iii) x=56° (iv) x=55° (v) x=58°

18. The altitude corresponding to the side $\overline{QR}$



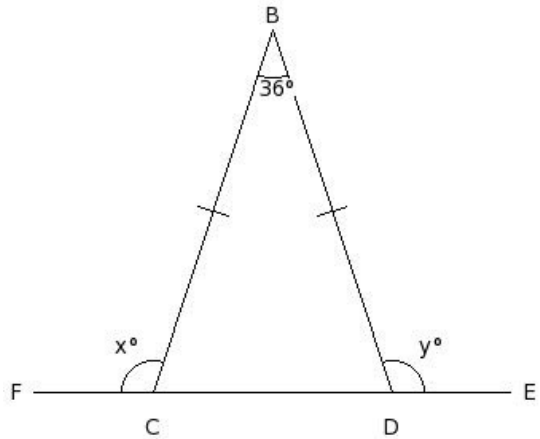
(i) $\overline{PT}$ (ii) $\overline{RU}$ (iii) $\overline{PS}$ (iv) $\overline{PQ}$ (v) $\overline{QT}$

19. The vertex opposite to the side $\overline{IJ}$



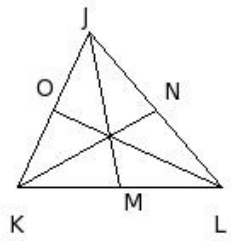
(i) $\overline{KL}$ (ii) J (iii) I (iv) K

20. Find the unknown marked angles in the following figure



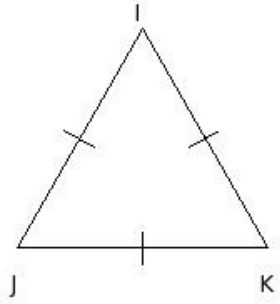
(i) x=107°,y=107° (ii) x=106°,y=106° (iii) x=110°,y=110° (iv) x=108°,y=108° (v) x=109°,y=109°

21. The median corresponding to the side $\overline{JK}$



(i) $\overline{KN}$ (ii) $\overline{JM}$ (iii) $\overline{LO}$ (iv) $\overline{JN}$ (v) $\overline{JK}$

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



(i) IJ = 12 cm , JK = 14 cm , KI = 11 cm (ii) IJ = 13 cm , JK = 11 cm , KI = 13 cm

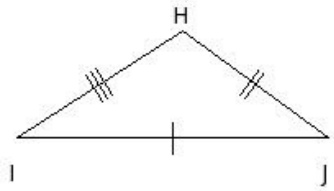
(iii) IJ = 11 cm , JK = 10 cm , KI = 14.87 cm (iv) IJ = 11 cm , JK = 11 cm , KI = 15.56 cm

(v) IJ = 15 cm , JK = 15 cm , KI = 15 cm

23. In a right angled triangle, if one of the angles is 40.6°, find the third angle

(i) 64.4° (ii) 79.4° (iii) 49.4° (iv) 54.4° (v) 59.4°

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



(i) HI = 15 cm , IJ = 15 cm , JH = 21.21 cm (ii) HI = 12 cm , IJ = 19 cm , JH = 11 cm

(iii) HI = 11 cm , IJ = 11 cm , JH = 13 cm (iv) HI = 14 cm , IJ = 15 cm , JH = 20.52 cm

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

25. If all the three angles of a triangle are of the same measure, find the measure of each of the angles.

(i) 59° (ii) 62° (iii) 61° (iv) 58° (v) 60°

Assignment Key

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