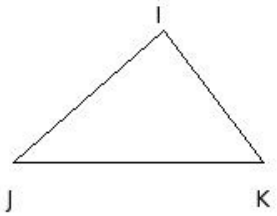
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : The Triangle and its Properties

Grade : CBSE Grade VII

1. The vertex opposite to the side $\overline{KI}$



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

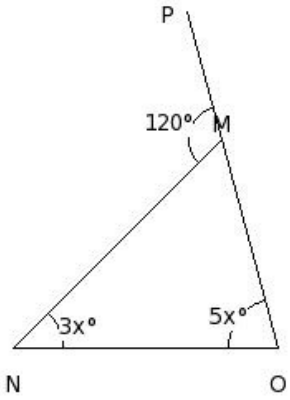
2. Which of the following are measures of an acute angled triangle ?

(i) $\angle C = 109.8°$, $\angle D = 35.1°$, $\angle E = 35.1°$ (ii) $\angle C = 45°$, $\angle D = 90°$, $\angle E = 45°$

(iii) $\angle C = 126.32°$, $\angle D = 28.91°$, $\angle E = 24.77°$ (iv) $\angle C = 42.71°$, $\angle D = 90°$, $\angle E = 47.29°$

(v) $\angle C = 62.97°$, $\angle D = 54.07°$, $\angle E = 62.96°$

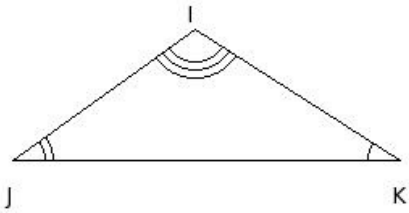
3. In the following figure, one side of a triangle has been produced. Find all the angles of the triangle.



(i) M=60°,N=45°,O=75° (ii) M=60°,N=43°,O=77° (iii) M=58°,N=45°,O=77° (iv) M=62°,N=45°,O=73°

(v) M=58°,N=47°,O=75°

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



(i) $\angle I = 53.13°$, $\angle J = 67.38°$, $\angle K = 59.49°$ (ii) $\angle I = 111.66°$, $\angle J = 35.51°$, $\angle K = 32.83°$

(iii) $\angle I = 54.77°$, $\angle J = 54.77°$, $\angle K = 70.46°$ (iv) $\angle I = 45°$, $\angle J = 90°$, $\angle K = 45°$

(v) $\angle I = 47.73°$, $\angle J = 90°$, $\angle K = 42.27°$

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

(i) $\angle K = 40.6°$, $\angle L = 90°$, $\angle M = 49.4°$ (ii) $\angle K = 45.21°$, $\angle L = 51.32°$, $\angle M = 83.47°$

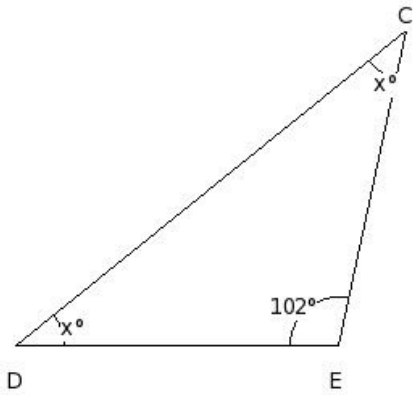
(iii) $\angle K = 60°$, $\angle L = 60°$, $\angle M = 60°$ (iv) $\angle K = 45°$, $\angle L = 90°$, $\angle M = 45°$

(v) $\angle K = 38.94°$, $\angle L = 70.53°$, $\angle M = 70.53°$

6. In a right-angled triangle if one of the acute angles is 64°, find the measure of the other acute angle.

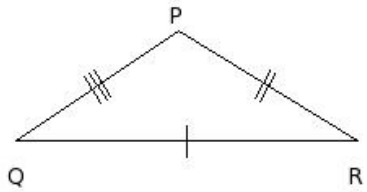
(i) 24° (ii) 28° (iii) 25° (iv) 27° (v) 26°

7. Find the unknown angles in the following figure



(i) C=38°,D=38° (ii) C=40°,D=40° (iii) C=41°,D=41° (iv) C=39°,D=39° (v) C=37°,D=37°

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

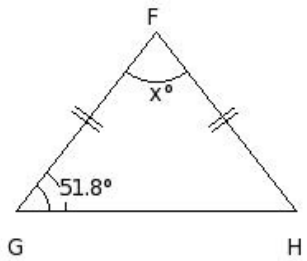


(i) PQ = 10 cm , QR = 14 cm , RP = 13 cm (ii) PQ = 15 cm , QR = 12 cm , RP = 19.21 cm

(iii) PQ = 12 cm , QR = 21 cm , RP = 13 cm (iv) PQ = 13 cm , QR = 13 cm , RP = 15 cm

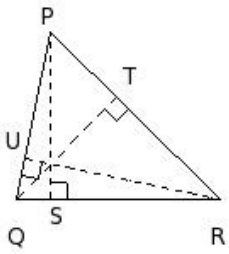
(v) PQ = 11 cm , QR = 11 cm , RP = 15.56 cm

9. Calculate the value of x in the following figure



(i) x=76.4° (ii) x=74.4° (iii) x=77.4° (iv) x=78.4° (v) x=75.4°

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



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

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

(i) CD = 15 cm , DE = 10 cm , EC = 12 cm (ii) CD = 10 cm , DE = 14 cm , EC = 15 cm

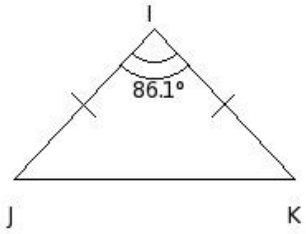
(iii) CD = 14 cm , DE = 14 cm , EC = 14 cm (iv) CD = 14 cm , DE = 13 cm , EC = 19.1 cm

(v) CD = 11 cm , DE = 15 cm , EC = 10 cm

12. In a right angled triangle, if one of the angles is 51.34°, find the third angle

(i) 38.66° (ii) 53.66° (iii) 43.66° (iv) 68.66° (v) 48.66°

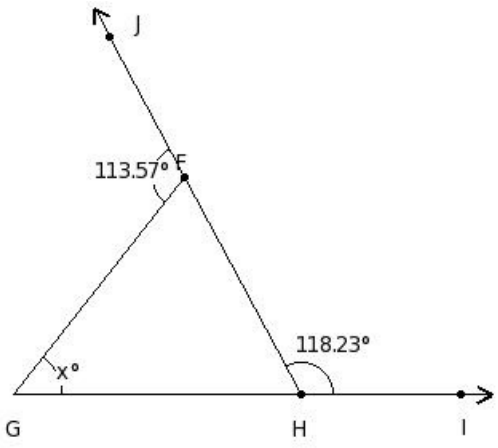
13. In the given triangle, ∠I = 86.1°. Find the measure of ∠J and ∠K



(i) ∠J = ∠K = 48.95° (ii) ∠J = ∠K = 47.95° (iii) ∠J = ∠K = 45.95° (iv) ∠J = ∠K = 44.95°

(v) ∠J = ∠K = 46.95°

14. Find the unknown marked angle in the following figure



(i) x=49.8° (ii) x=52.8° (iii) x=50.8° (iv) x=53.8° (v) x=51.8°

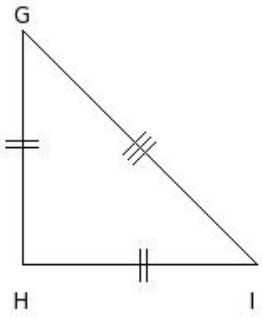
15. In a right angled triangle, if one of the sides is 18 cm and hypotenuse 82 cm, find the third side

(i) 78.00 cm (ii) 82.00 cm (iii) 79.00 cm (iv) 81.00 cm (v) 80.00 cm

16. In △FGH, if ∠F = 59° and ∠G = 65°, find the measure of ∠H

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

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



(i) GH = 10 cm , HI = 20 cm , IG = 12 cm (ii) GH = 11 cm , HI = 12 cm , IG = 15 cm

(iii) GH = 14 cm , HI = 14 cm , IG = 14 cm (iv) GH = 14 cm , HI = 14 cm , IG = 19.8 cm

(v) GH = 13 cm , HI = 15 cm , IG = 10 cm

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

(i) CD = 20 cm , DE = 11 cm , EC = 6 cm (ii) CD = 6 cm , DE = 13 cm , EC = 5 cm

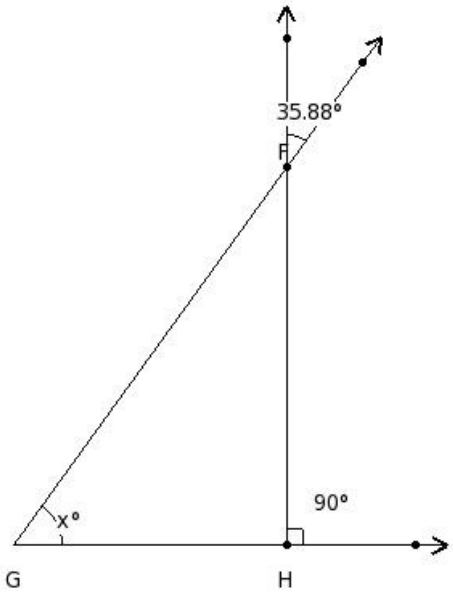
(iii) CD = 12 cm , DE = 10 cm , EC = 11 cm (iv) CD = 19 cm , DE = 5 cm , EC = 10 cm

(v) CD = 9 cm , DE = 5 cm , EC = 20 cm

19. In $\triangle FGH$, if $\angle F = 70°$ and $\angle G = \angle H$, find the measure of each of the equal angles of the triangle

(i) 56° (ii) 53° (iii) 57° (iv) 54° (v) 55°

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

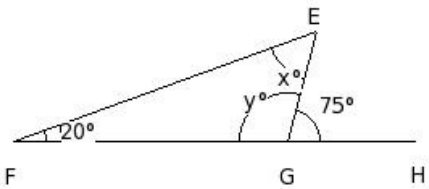


(i) x=52.12° (ii) x=54.12° (iii) x=53.12° (iv) x=55.12° (v) x=56.12°

21. One angle of a triangle measures 45° and the other two angles are in the ratio 4 : 11. Find these angles.

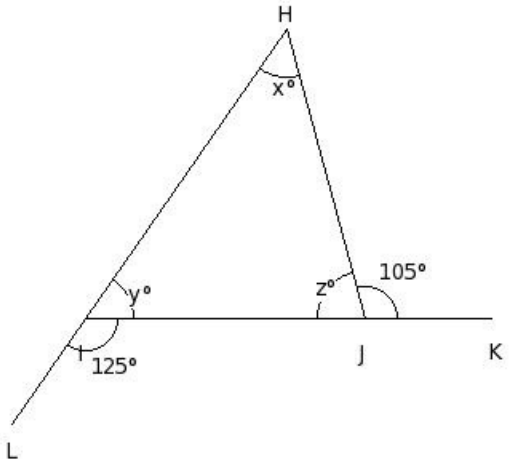
(i) B=35°,C=98° (ii) B=34°,C=97° (iii) B=37°,C=100° (iv) B=38°,C=101° (v) B=36°,C=99°

22. In the following figure, one side of a triangle has been produced. Find the values of x and y.



(i) x=56°,y=106° (ii) x=54°,y=104° (iii) x=57°,y=107° (iv) x=55°,y=105° (v) x=53°,y=103°

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



(i) x=50°,y=53°,z=77° (ii) x=52°,y=55°,z=73° (iii) x=50°,y=55°,z=75° (iv) x=48°,y=57°,z=75°

(v) x=48°,y=55°,z=77°

24. The angles of a triangle ABC are in the ratio 4 : 7 : 9. Find the measure of each angle of the triangle

(i) A=38°,B=63°,C=79° (ii) A=36°,B=61°,C=83° (iii) A=34°,B=65°,C=81° (iv) A=34°,B=63°,C=83°

(v) A=36°,B=63°,C=81°

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

(i) ∠E = 111.32° , ∠F = 36.04° , ∠G = 32.64° (ii) ∠E = 71.38° , ∠F = 54.31° , ∠G = 54.31°

(iii) ∠E = 60° , ∠F = 60° , ∠G = 60° (iv) ∠E = 37.57° , ∠F = 90° , ∠G = 52.43°

(v) ∠E = 51.32° , ∠F = 45.21° , ∠G = 83.47°

Assignment Key

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