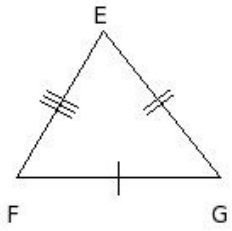
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : The Triangle and its Properties

Grade : CBSE Grade VII

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

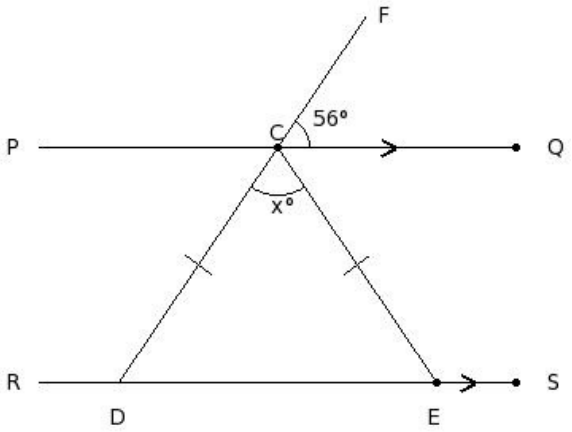


(i) EF = 11 cm , FG = 11 cm , GE = 15.56 cm (ii) EF = 12 cm , FG = 14 cm , GE = 18.44 cm

(iii) EF = 14 cm , FG = 22 cm , GE = 12 cm (iv) EF = 10 cm , FG = 12 cm , GE = 11 cm

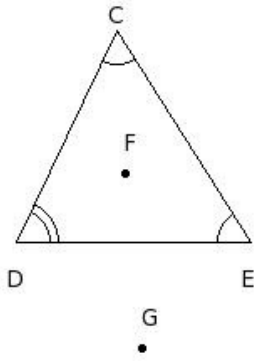
(v) EF = 15 cm , FG = 24 cm , GE = 15 cm

2. In the given figure, PQ ∥ RS, ∠FCQ = 56° and CD = EC. Find the measure of x.



(i) x=68° (ii) x=69° (iii) x=70° (iv) x=67° (v) x=66°

3. The vertices of the triangle are

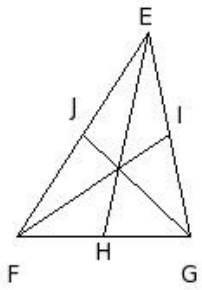


(i) E , F , G (ii) D , E , G (iii) C , D , E (iv) C , D , F (v) D , E , F

4. In a right-angled triangle, the two acute angles are in the ratio 1 : 1. Find these angles.

(i) A=43°,C=43° (ii) A=44°,C=44° (iii) A=45°,C=45° (iv) A=46°,C=46° (v) A=47°,C=47°

5. The median corresponding to the side $\overline{EF}$



(i) $\overline{EI}$ (ii) $\overline{GJ}$ (iii) $\overline{EH}$ (iv) $\overline{FI}$ (v) $\overline{EF}$

6. Two angles of a triangle measure 63° and 62° respectively. Find the measure of the third angle of the triangle

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

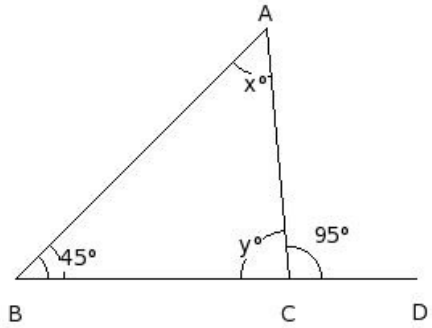
7. Find the measures of the three angles suitable to form a triangle?

(i) ∠M = 87.30° , ∠N = 82.30° , ∠O = 43.50° (ii) ∠M = 66.90° , ∠N = 111.80° , ∠O = 89.90°

(iii) ∠M = 45.21° , ∠N = 51.32° , ∠O = 83.47° (iv) ∠M = 45.20° , ∠N = 54.20° , ∠O = 84.90°

(v) ∠M = 39.30° , ∠N = 54.20° , ∠O = 48.50°

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



(i) x=50°,y=85° (ii) x=49°,y=84° (iii) x=52°,y=87° (iv) x=48°,y=83° (v) x=51°,y=86°

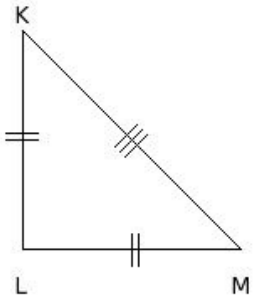
9. Which of the following are measures of an obtuse angled triangle ?

(i) ∠N = 78.46° , ∠O = 57.12° , ∠P = 44.42° (ii) ∠N = 56.94° , ∠O = 66.12° , ∠P = 56.94°

(iii) ∠N = 51.34° , ∠O = 90° , ∠P = 38.66° (iv) ∠N = 45° , ∠O = 90° , ∠P = 45°

(v) ∠N = 108° , ∠O = 34.02° , ∠P = 37.98°

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

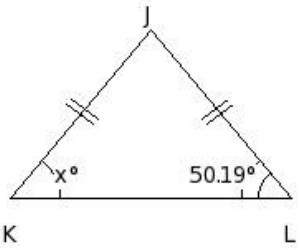


(i) KL = 10 cm , LM = 15 cm , MK = 13 cm (ii) KL = 11 cm , LM = 14 cm , MK = 10 cm

(iii) KL = 15 cm , LM = 21 cm , MK = 11 cm (iv) KL = 10 cm , LM = 10 cm , MK = 10 cm

(v) KL = 13 cm , LM = 13 cm , MK = 18.38 cm

11. Calculate the value of x in the following figure

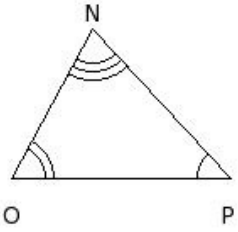


(i) x=49.19° (ii) x=52.19° (iii) x=50.19° (iv) x=51.19° (v) x=48.19°

12. One angle of a triangle measures 60° and the other two angles are in the ratio 3 : 5. Find these angles.

(i) B=45°,C=75° (ii) B=46°,C=76° (iii) B=47°,C=77° (iv) B=44°,C=74° (v) B=43°,C=73°

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

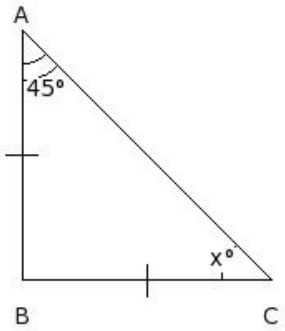


(i) ∠N = 70.46° , ∠O = 54.77° , ∠P = 54.77° (ii) ∠N = 45° , ∠O = 90° , ∠P = 45°

(iii) ∠N = 97.18° , ∠O = 41.41° , ∠P = 41.41° (iv) ∠N = 60° , ∠O = 60° , ∠P = 60°

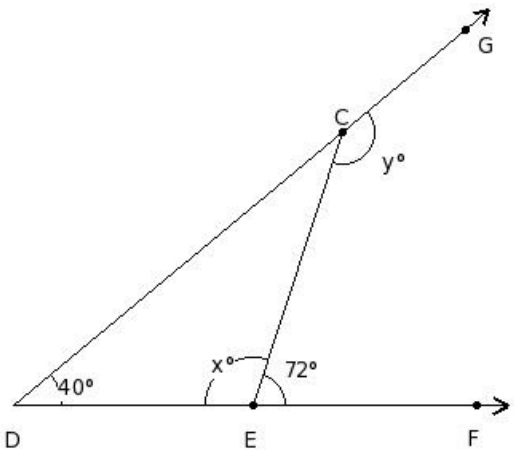
(v) ∠N = 71.79° , ∠O = 61.26° , ∠P = 46.95°

14. Find the unknown angle in the following figure



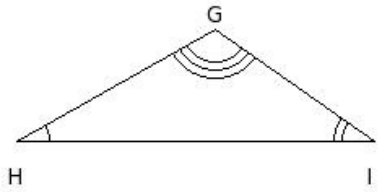
(i) x=45° (ii) x=46° (iii) x=43° (iv) x=47° (v) x=44°

15. Find the unknown marked angles in the following figure



(i) x=110°,y=150° (ii) x=108°,y=148° (iii) x=106°,y=146° (iv) x=109°,y=149° (v) x=107°,y=147°

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



(i) $\angle G = 42.51°$, $\angle H = 90°$, $\angle I = 47.49°$ (ii) $\angle G = 45°$, $\angle H = 90°$, $\angle I = 45°$

(iii) $\angle G = 115.37°$, $\angle H = 29.53°$, $\angle I = 35.1°$ (iv) $\angle G = 41.85°$, $\angle H = 69.07°$, $\angle I = 69.08°$

(v) $\angle G = 59.41°$, $\angle H = 52.62°$, $\angle I = 67.97°$

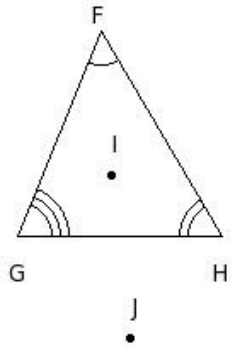
17. Which of the following are measures of a right angled triangle ?

(i) $\angle C = 60°$, $\angle D = 60°$, $\angle E = 60°$ (ii) $\angle C = 74.85°$, $\angle D = 55.83°$, $\angle E = 49.32°$

(iii) $\angle C = 35.54°$, $\angle D = 90°$, $\angle E = 54.46°$ (iv) $\angle C = 62.97°$, $\angle D = 62.96°$, $\angle E = 54.07°$

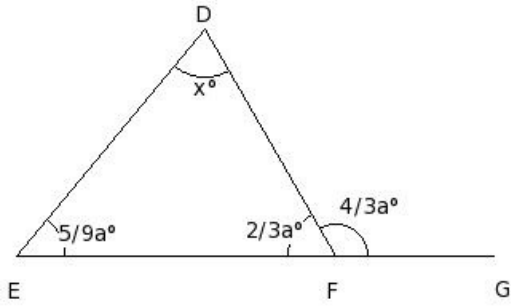
(v) $\angle C = 103.43°$, $\angle D = 45.78°$, $\angle E = 30.79°$

18. The sides of the triangle are



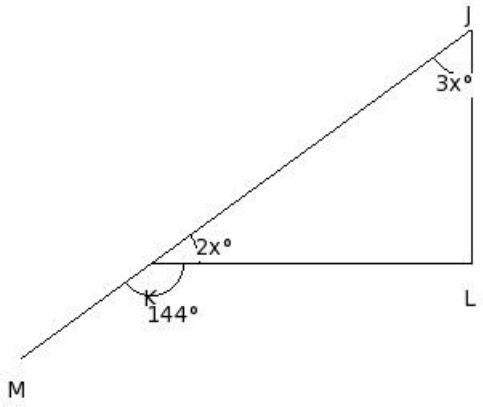
(i) $\overline{GH}, \overline{HF}, \overline{FG}$ (ii) $\overline{HJ}, \overline{JG}, \overline{GH}$ (iii) $\overline{HI}, \overline{IG}, \overline{GH}$ (iv) $\overline{IJ}, \overline{JH}, \overline{HI}$ (v) $\overline{GI}, \overline{IF}, \overline{FG}$

19. In the given figure, $\triangle DEF$ in which side EF has been produced to G. If $\angle FDE = x°$, $\angle DEF = (5/9a)°$, $\angle EFD = (2/3a)°$ and $\angle DFG = (4/3a)°$, find the values of a and x.



(i) a=88°,x=68° (ii) a=92°,x=72° (iii) a=91°,x=71° (iv) a=90°,x=70° (v) a=89°,x=69°

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



(i) J=52°,K=36°,L=92° (ii) J=52°,K=38°,L=90° (iii) J=56°,K=36°,L=88° (iv) J=54°,K=36°,L=90°

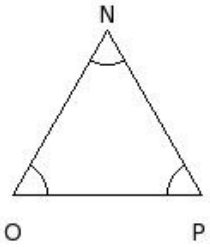
(v) J=54°,K=34°,L=92°

21. The vertical angle of an isosceles triangle is twice the sum of its base angles. Find each angle of the triangle.

(i) A=122°,B=30°,C=28° (ii) A=120°,B=30°,C=30° (iii) A=120°,B=28°,C=32°

(iv) A=118°,B=32°,C=30° (v) A=118°,B=30°,C=32°

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

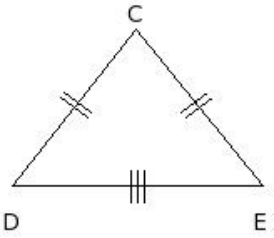


(i) ∠N = 45° , ∠O = 90° , ∠P = 45° (ii) ∠N = 73.74° , ∠O = 53.13° , ∠P = 53.13°

(iii) ∠N = 59.41° , ∠O = 52.62° , ∠P = 67.97° (iv) ∠N = 60° , ∠O = 60° , ∠P = 60°

(v) ∠N = 38.66° , ∠O = 90° , ∠P = 51.34°

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



(i) CD = 15 cm , DE = 14 cm , EC = 13 cm (ii) CD = 12 cm , DE = 12 cm , EC = 12 cm

(iii) CD = 10 cm , DE = 13 cm , EC = 16.4 cm (iv) CD = 12 cm , DE = 15 cm , EC = 12 cm

(v) CD = 15 cm , DE = 10 cm , EC = 13 cm

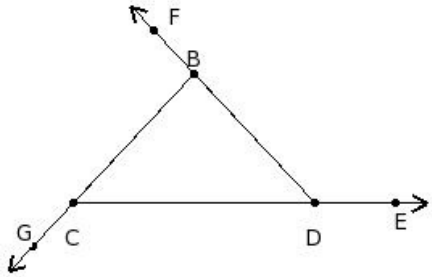
24. Which of the following are measures of a scalene triangle ?

(i) EF = 11 cm , FG = 15 cm , GE = 14 cm (ii) EF = 14 cm , FG = 15 cm , GE = 14 cm

(iii) EF = 12 cm , FG = 12 cm , GE = 16.97 cm (iv) EF = 10 cm , FG = 10 cm , GE = 10 cm

(v) EF = 10 cm , FG = 12 cm , GE = 10 cm

25. The exterior angles of the triangle are



(i) ∠GFD , ∠HDE , ∠IEF (ii) ∠FEC , ∠GCD , ∠HDE (iii) ∠DEB , ∠EBC , ∠FCE (iv) ∠EFC , ∠FCD , ∠GDF

(v) ∠EDB , ∠FBC , ∠GCD

Assignment Key

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