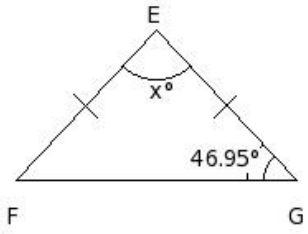
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Triangles and Its Properties

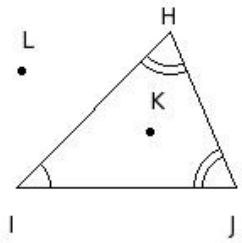
Grade : SSC Grade VII

1. Find the unknown angle in the following figure



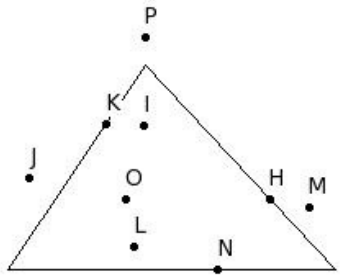
(i) x=84.1° (ii) x=87.1° (iii) x=86.1° (iv) x=85.1° (v) x=88.1°

2. The angles of the triangle are



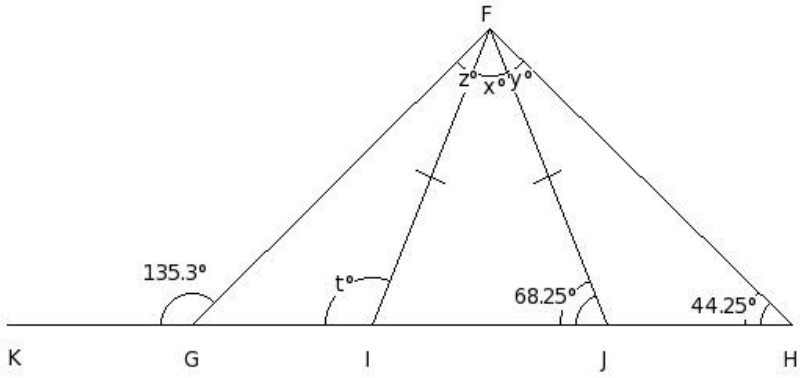
(i) ∠H , ∠I , ∠J (ii) ∠J , ∠K , ∠L (iii) ∠I , ∠J , ∠K (iv) ∠H , ∠I , ∠K (v) ∠I , ∠J , ∠L

3. Identify the points that are on the triangle



(i) {H,K,N} (ii) {I,L,O} (iii) {J,M,P} (iv) {N,L,H} (v) {K,N,P}

4. In the given figure, if FI = JF, find the values of x , y , z and t

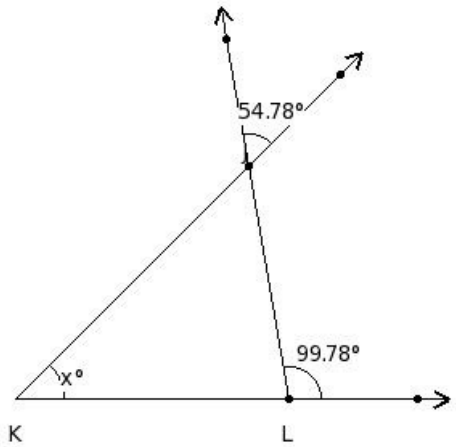


(i) x =43.5°, y =24°, z =24.55° , t =112.75° (ii) x =43.5°, y =22°, z =21.55° , t =111.75°

(iii) x =43.5°, y =24°, z =23.55° , t =111.75° (iv) x =43.5°, y =26°, z =25.55° , t =111.75°

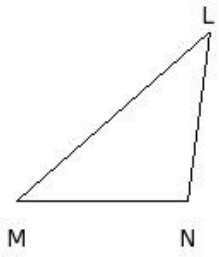
(v) x =43.5°, y =24°, z =22.55° , t =110.75°

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



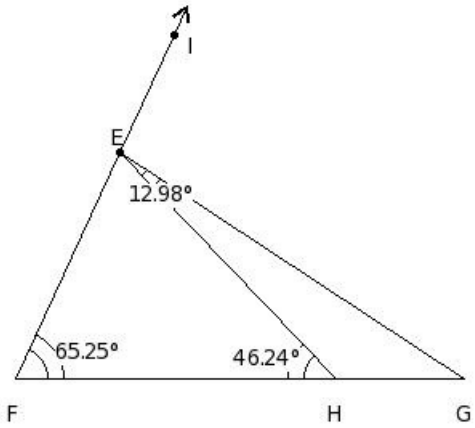
(i) x=44° (ii) x=46° (iii) x=45° (iv) x=47° (v) x=43°

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



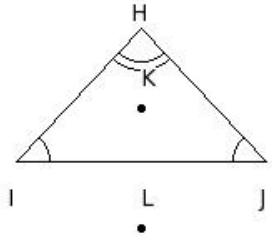
(i) L (ii) P (iii) M (iv) $\overline{NO}$

7. In below given figure, find ∠GEI



(i) 96.51° (ii) 97.51° (iii) 99.51° (iv) 100.51° (v) 98.51°

8. The sides of the triangle are



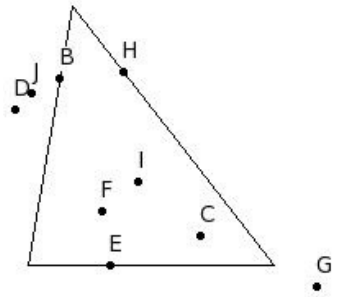
(i) $\overline{JK}, \overline{KI}, \overline{IJ}$ (ii) $\overline{IK}, \overline{KH}, \overline{HI}$ (iii) $\overline{JL}, \overline{LI}, \overline{IJ}$ (iv) $\overline{IJ}, \overline{JH}, \overline{HI}$ (v) $\overline{KL}, \overline{LJ}, \overline{JK}$

9. The ratio between the base angle and the vertical angle of an isosceles triangle is 13 : 10. Find each angle of the triangle

(i) A=48°,B=65°,C=67° (ii) A=50°,B=63°,C=67° (iii) A=50°,B=65°,C=65° (iv) A=52°,B=65°,C=63°

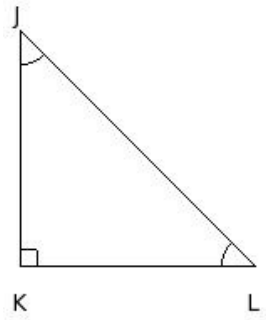
(v) A=48°,B=67°,C=65°

10. Identify the points that are inside the triangle



(i) {B,E,H} (ii) {C,J,I} (iii) {C,I,E} (iv) {D,G,J} (v) {C,F,I}

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



(i) ∠J = 73.69° , ∠K = 63.03° , ∠L = 43.28° (ii) ∠J = 67.97° , ∠K = 59.41° , ∠L = 52.62°

(iii) ∠J = 60° , ∠K = 60° , ∠L = 60° (iv) ∠J = 92.87° , ∠K = 38.62° , ∠L = 48.51°

(v) ∠J = 45° , ∠K = 90° , ∠L = 45°

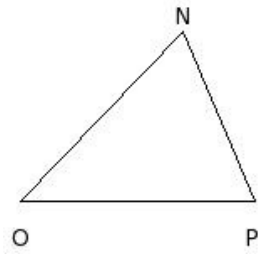
12. Which of the following are measures of an isosceles right angled triangle ?

(i) MN = 11 cm , NO = 15 cm , OM = 10 cm (ii) MN = 10 cm , NO = 20 cm , OM = 12 cm

(iii) MN = 15 cm , NO = 15 cm , OM = 15 cm (iv) MN = 13 cm , NO = 13 cm , OM = 18.38 cm

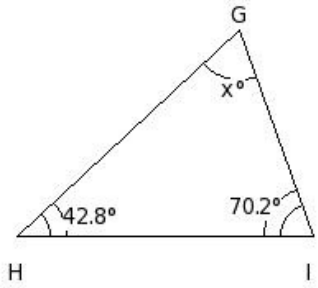
(v) MN = 11 cm , NO = 15 cm , OM = 14 cm

13. The side opposite to the vertex O



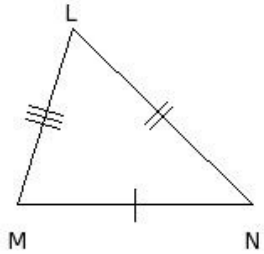
(i) $\overline{NR}$ (ii) $\overline{PN}$ (iii) $\overline{QO}$ (iv) $\overline{NO}$ (v) $\overline{OP}$

14. Find the unknown angle from the following figure



(i) x=66° (ii) x=65° (iii) x=69° (iv) x=68° (v) x=67°

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



(i) LM = 11 cm , MN = 14 cm , NL = 11 cm (ii) LM = 11 cm , MN = 11 cm , NL = 15.56 cm

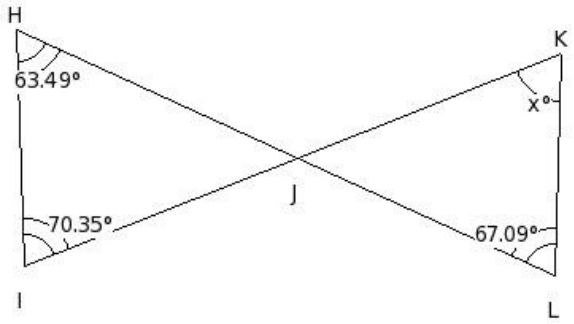
(iii) LM = 15 cm , MN = 10 cm , NL = 15 cm (iv) LM = 13 cm , MN = 13 cm , NL = 13 cm

(v) LM = 11 cm , MN = 14 cm , NL = 15 cm

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

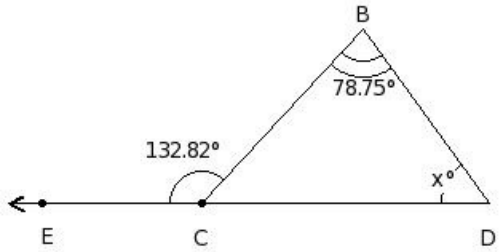
(i) median (ii) altitude (iii) incentre (iv) excentre (v) orthocentre

17. In the given figure, calculate the value of x.



(i) x=67.75° (ii) x=64.75° (iii) x=65.75° (iv) x=66.75° (v) x=68.75°

18. Calculate the value of x in the following figure



(i) x=56.07° (ii) x=55.07° (iii) x=53.07° (iv) x=54.07° (v) x=52.07°

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

(i) ∠B = 60° , ∠C = 60° , ∠D = 60° (ii) ∠B = 67.97° , ∠C = 52.62° , ∠D = 59.41°

(iii) ∠B = 45° , ∠C = 90° , ∠D = 45° (iv) ∠B = 51.32° , ∠C = 77.36° , ∠D = 51.32°

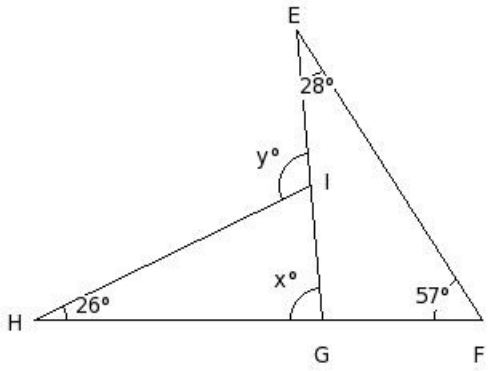
(v) ∠B = 95.74° , ∠C = 33.56° , ∠D = 50.7°

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

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

(v) A=18°,B=80°,C=82°

21. Find the unknown marked angles in the following figure



(i) x=86°,y=112° (ii) x=84°,y=110° (iii) x=85°,y=111° (iv) x=83°,y=109° (v) x=87°,y=113°

22. In △BCD, if ∠B = 30° and ∠C = ∠D, find the measure of each of the equal angles of the triangle

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

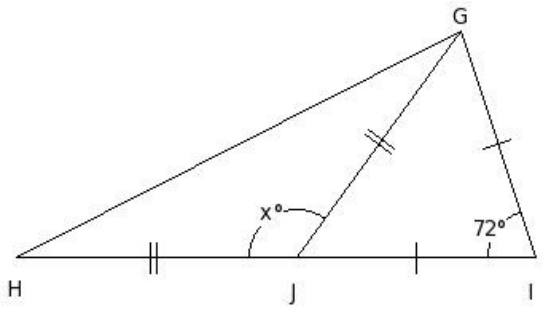
23. Which of the following are measures of an isosceles triangle ?

(i) ∠C = 44.42° , ∠D = 62.96° , ∠E = 72.62° (ii) ∠C = 60° , ∠D = 60° , ∠E = 60°

(iii) ∠C = 46.26° , ∠D = 66.87° , ∠E = 66.87° (iv) ∠C = 85.46° , ∠D = 52.89° , ∠E = 41.65°

(v) ∠C = 40.91° , ∠D = 90° , ∠E = 49.09°

24. In the given figure, find the value of x.



(i) x=125° (ii) x=127° (iii) x=124° (iv) x=126° (v) x=128°

25. How many diagonals does a triangle have?

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

Assignment Key

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