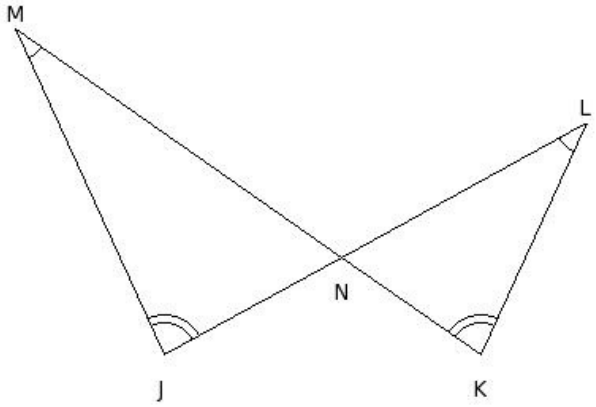
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Triangles

Grade : ICSE Grade VIII

1. With the data in the figure, △JNM ≅ △KNL by which property?



(i) RHS Congruency (ii) not congruent (iii) SAS Congruency (iv) SSS Congruency (v) ASA Congruency

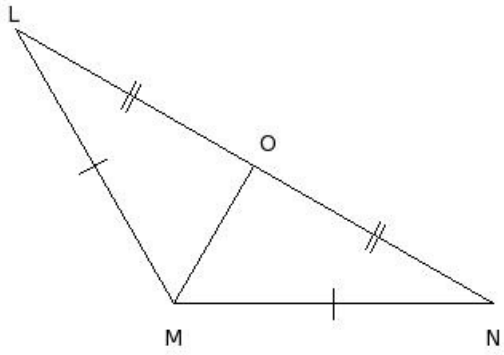
2. Which of the following are measures of an isosceles triangle ?

(i) ∠L = 63.03° , ∠M = 73.69° , ∠N = 43.28° (ii) ∠L = 46.26° , ∠M = 66.87° , ∠N = 66.87°

(iii) ∠L = 38.16° , ∠M = 90° , ∠N = 51.84° (iv) ∠L = 67.38° , ∠M = 59.49° , ∠N = 53.13°

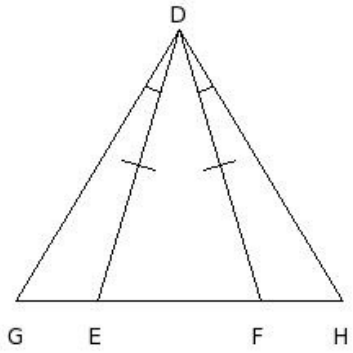
(v) ∠L = 60° , ∠M = 60° , ∠N = 60°

3. In the given figure, △LMN is an obtuse angled triangle. △LMO ≅ △NMO by which property?



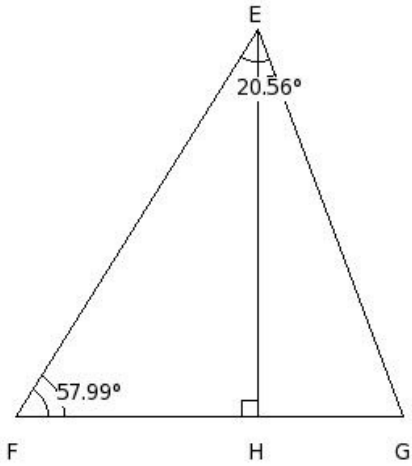
(i) RHS Congruency (ii) SSS Congruency (iii) SAS Congruency (iv) ASA Congruency (v) not congruent

4. With the data in the given figure, △DEG ≅ △DFH by which property?



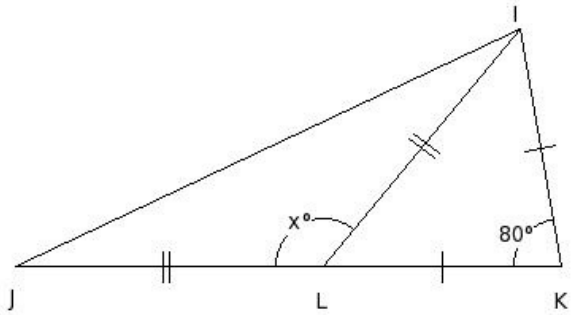
(i) SSS Congruency (ii) not congruent (iii) SAS Congruency (iv) RHS Congruency (v) ASA Congruency

5. In the given figure , if HE ⊥ FG and ∠EFH = 57.99°, find ∠HGE



(i) 71.44° (ii) 68.44° (iii) 70.44° (iv) 69.44° (v) 67.44°

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



(i) x=131° (ii) x=128° (iii) x=129° (iv) x=132° (v) x=130°

7. In the given figure, $\triangle EGF$ is right-angled at G. T is the mid-point of EG and U is the mid-point of FG. Which of the following cases are true?

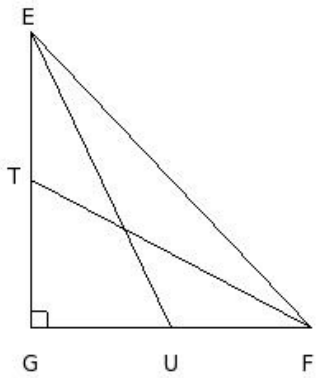
a) $4\,EU^2 = 4\,EG^2 + FG^2$

b) $4\,EU^2 = 4\,FG^2 + EG^2$

c) $4\,FT^2 = 4\,FG^2 + EG^2$

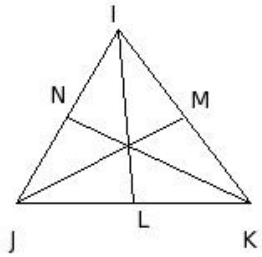
d) $4\,(EU^2 + FT^2) = 5\,EF^2$

e) $4\,FT^2 = 4\,EG^2 + FG^2$



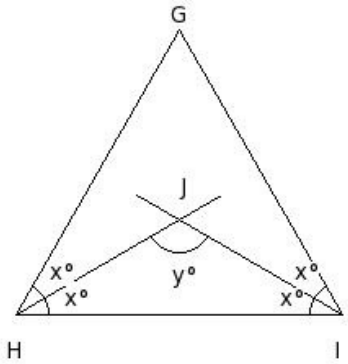
(i) {b,a} (ii) {e,c} (iii) {b,e,d} (iv) {b,a,c} (v) {a,c,d}

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



(i) $\overline{IL}$ (ii) $\overline{IJ}$ (iii) $\overline{IM}$ (iv) $\overline{JM}$ (v) $\overline{KN}$

9. In the given figure, $\triangle GHI$ is a triangle in which $\angle G = \angle H = \angle I$.
This bisectors of $\angle H$ and $\angle I$ intersect at J. Find $\angle J =$

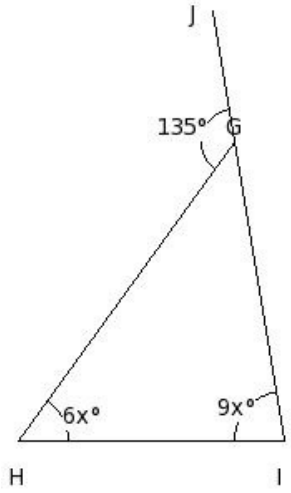


(i) 120° (ii) 119° (iii) 122° (iv) 121° (v) 118°

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

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

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

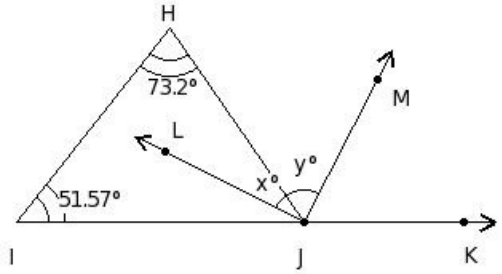


(i) G=47°,H=54°,I=79° (ii) G=43°,H=56°,I=81° (iii) G=45°,H=52°,I=83° (iv) G=45°,H=54°,I=81°

(v) G=43°,H=54°,I=83°

In the given figure, ∠H = 73.2° and ∠I = 51.57°.

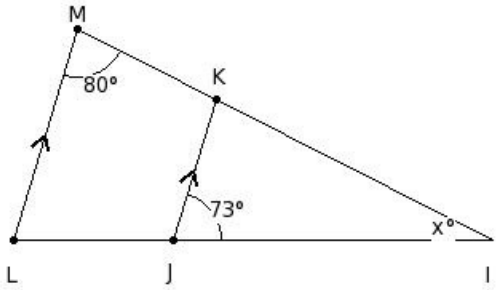
12. Side IJ is produced to K, so that ∠IJH and ∠HJK form a linear pair.
If $\overrightarrow{JL}$ and $\overrightarrow{JM}$ are the bisectors of ∠IJH and ∠HJK, find x and y.



(i) x=29.61°,y=64.39° (ii) x=25.61°,y=60.39° (iii) x=28.61°,y=63.39° (iv) x=26.61°,y=61.39°

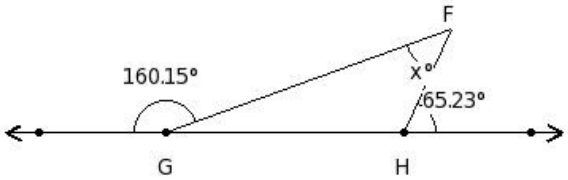
(v) x=27.61°,y=62.39°

13. In the given figure, it is given that KJ ∥ ML , ∠KML = 80° and ∠KJI = 73°. Find the value of x.



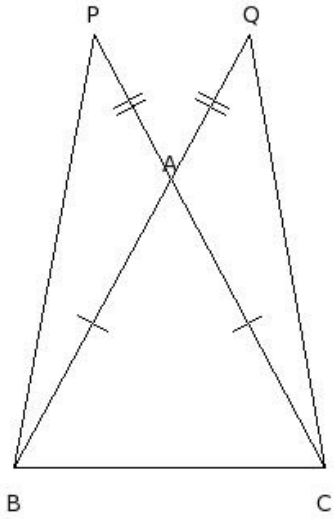
(i) x=25° (ii) x=29° (iii) x=28° (iv) x=26° (v) x=27°

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



(i) x=46.38° (ii) x=45.38° (iii) x=43.38° (iv) x=44.38° (v) x=47.38°

15. With the data in the given figure, △PBC ≅ △QCB by which property?



(i) SAS Congruency (ii) SSS Congruency (iii) RHS Congruency (iv) not congruent (v) ASA Congruency

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

(i) PQ = 11 cm , QR = 11 cm , RP = 11 cm (ii) PQ = 11 cm , QR = 14 cm , RP = 17.8 cm

(iii) PQ = 13 cm , QR = 15 cm , RP = 13 cm (iv) PQ = 12 cm , QR = 12 cm , RP = 16.97 cm

(v) PQ = 15 cm , QR = 11 cm , RP = 10 cm

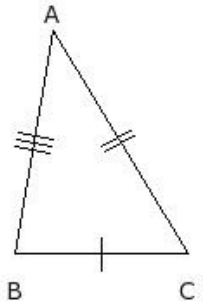
17. Which of the following are measures of an isosceles right angled triangle ?

(i) $\angle B = 61.26°$, $\angle C = 46.95°$, $\angle D = 71.79°$ (ii) $\angle B = 60°$, $\angle C = 60°$, $\angle D = 60°$

(iii) $\angle B = 45°$, $\angle C = 90°$, $\angle D = 45°$ (iv) $\angle B = 136.3°$, $\angle C = 23.49°$, $\angle D = 20.21°$

(v) $\angle B = 48.37°$, $\angle C = 76.33°$, $\angle D = 55.3°$

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



(i) AB = 14 cm , BC = 22 cm , CA = 13 cm (ii) AB = 10 cm , BC = 10 cm , CA = 14.14 cm

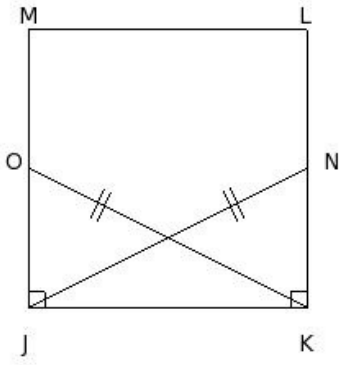
(iii) AB = 13 cm , BC = 12 cm , CA = 17.69 cm (iv) AB = 13 cm , BC = 10 cm , CA = 15 cm

(v) AB = 12 cm , BC = 19 cm , CA = 11 cm

19. In $\triangle HIJ$, if $\angle H = 58°$ and $\angle I = 50°$, find the measure of $\angle J$

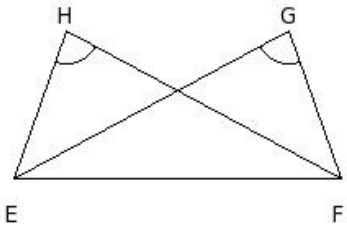
(i) J=74° (ii) J=72° (iii) J=70° (iv) J=73° (v) J=71°

20. With the data in the given figure, $\triangle OJK \cong \triangle NKJ$ by which property?



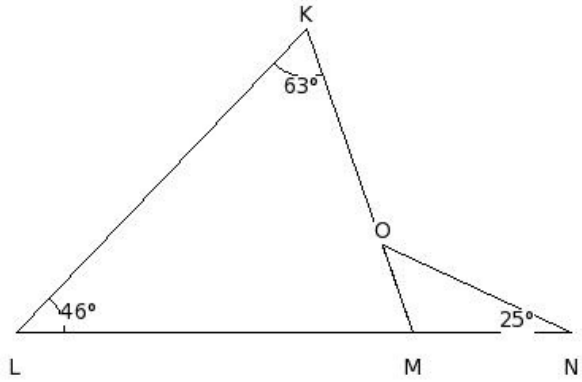
(i) RHS Congruency (ii) not congruent (iii) SSS Congruency (iv) ASA Congruency (v) SAS Congruency

21. With the data in the figure, $\triangle EFH \cong \triangle FEG$ by which property?



(i) SAS Congruency (ii) SSS Congruency (iii) ASA Congruency (iv) not congruent (v) RHS Congruency

22. In the given figure, find ∠OMN



(i) 109° (ii) 108° (iii) 107° (iv) 110° (v) 111°

23. Find the measure of each of the two equal angles of an isosceles right-angled triangle.

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

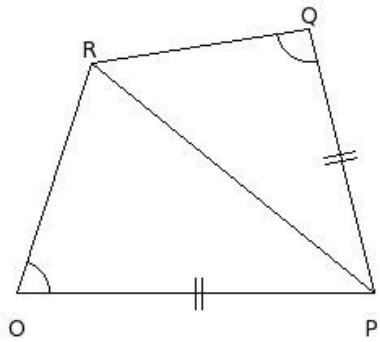
24. Which of the following are measures of an acute angled triangle ?

(i) ∠K = 67.97° , ∠L = 52.62° , ∠M = 59.41° (ii) ∠K = 43.03° , ∠L = 90° , ∠M = 46.97°

(iii) ∠K = 45° , ∠L = 90° , ∠M = 45° (iv) ∠K = 92.02° , ∠L = 46.2° , ∠M = 41.78°

(v) ∠K = 121.87° , ∠L = 26.41° , ∠M = 31.72°

25. With the data in the given figure, △OPR ≅ △QPR by which property?



(i) SSS Congruency (ii) SAS Congruency (iii) ASA Congruency (iv) not congruent (v) RHS Congruency

Assignment Key

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