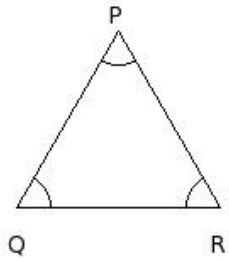
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Triangles

Grade : ICSE Grade IX

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

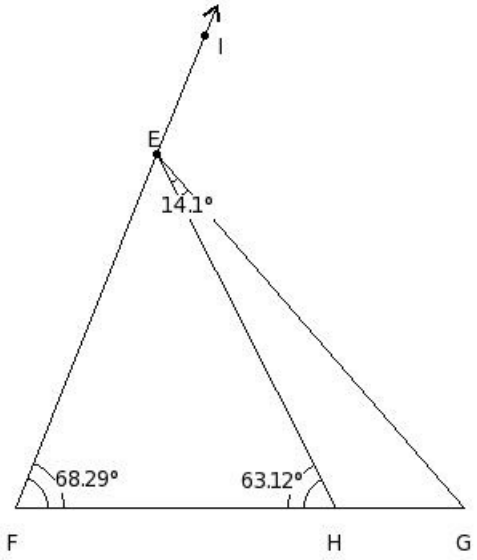


(i) $\angle P = 60°$, $\angle Q = 60°$, $\angle R = 60°$ (ii) $\angle P = 70.81°$, $\angle Q = 47.91°$, $\angle R = 61.28°$

(iii) $\angle P = 45°$, $\angle Q = 90°$, $\angle R = 45°$ (iv) $\angle P = 73.74°$, $\angle Q = 53.13°$, $\angle R = 53.13°$

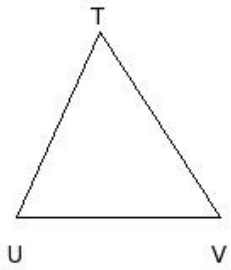
(v) $\angle P = 47.49°$, $\angle Q = 90°$, $\angle R = 42.51°$

2. In below given figure, find $\angle EHG$



(i) 117.88° (ii) 116.88° (iii) 115.88° (iv) 114.88° (v) 118.88°

3. The side opposite to the vertex T



(i) $\overline{TU}$ (ii) $\overline{UV}$ (iii) $\overline{WU}$ (iv) $\overline{TX}$ (v) $\overline{VT}$

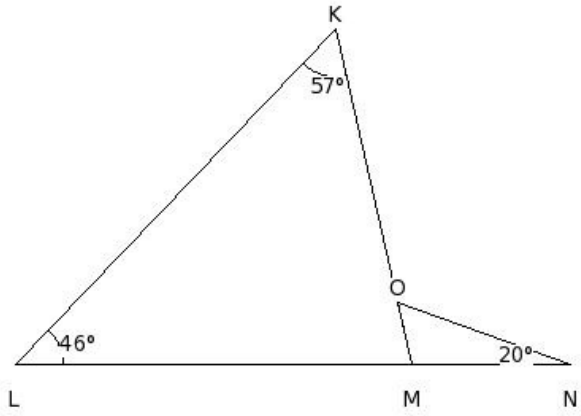
4. Which of the following are measures of an obtuse angled triangle ?

(i) $\angle A = 94.94°$, $\angle B = 48.35°$, $\angle C = 36.71°$ (ii) $\angle A = 45°$, $\angle B = 90°$, $\angle C = 45°$

(iii) $\angle A = 74.85°$, $\angle B = 49.32°$, $\angle C = 55.83°$ (iv) $\angle A = 47.73°$, $\angle B = 90°$, $\angle C = 42.27°$

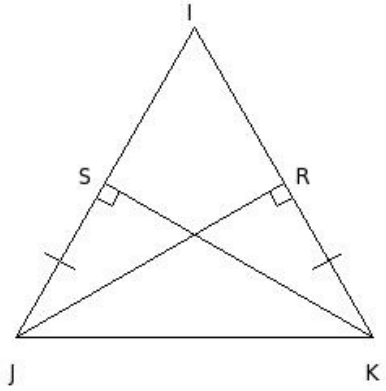
(v) $\angle A = 57.42°$, $\angle B = 65.16°$, $\angle C = 57.42°$

5. In the given figure, find ∠OMN



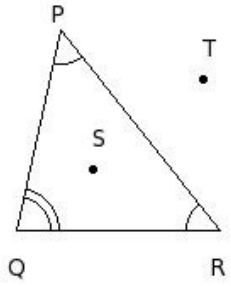
(i) 102° (ii) 105° (iii) 103° (iv) 104° (v) 101°

6. With the given data in the figure, △SJK ≅ △RKJ by which property?



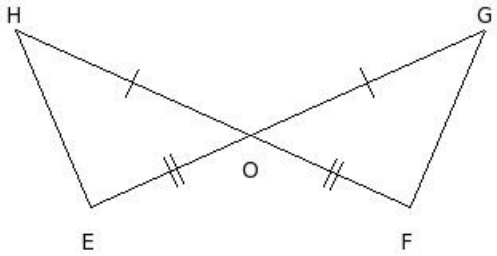
(i) SSS Congruency (ii) not congruent (iii) SAS Congruency (iv) RHS Congruency (v) ASA Congruency

7. The sides of the triangle are



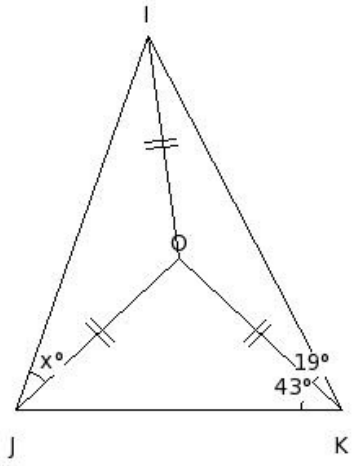
(i) $\overline{RS}, \overline{SQ}, \overline{QR}$ (ii) $\overline{ST}, \overline{TR}, \overline{RS}$ (iii) $\overline{RT}, \overline{TQ}, \overline{QR}$ (iv) $\overline{QR}, \overline{RP}, \overline{PQ}$ (v) $\overline{QS}, \overline{SP}, \overline{PQ}$

8. With the data in the given figure, △EHO ≅ △FGO by which property?



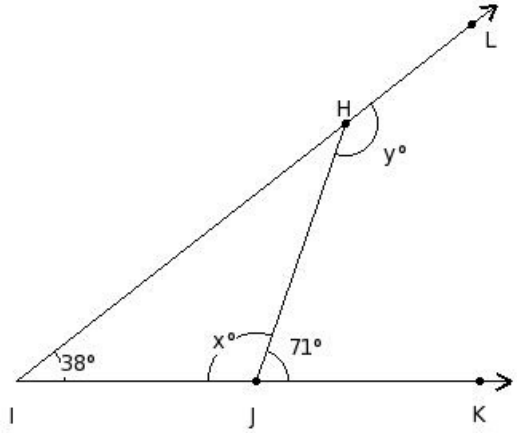
(i) RHS Congruency (ii) SAS Congruency (iii) ASA Congruency (iv) not congruent (v) SSS Congruency

9. Find the value of x in the given figure.



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

10. Find the unknown marked angles in the following figure



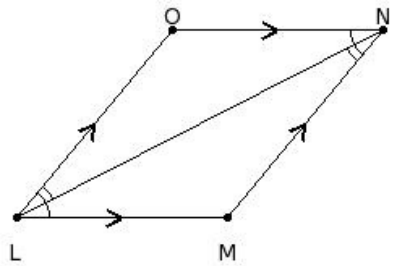
(i) x=109°,y=147° (ii) x=110°,y=148° (iii) x=108°,y=146° (iv) x=107°,y=145° (v) x=111°,y=149°

11. Which of the following are true?

a) Congruent figures have same area.
b) Similar figures have same area.
c) If two figures are similar, then they are congruent too.
d) Similar and congruent are not synonymous.
e) If two figures are congruent, then they are similar too.

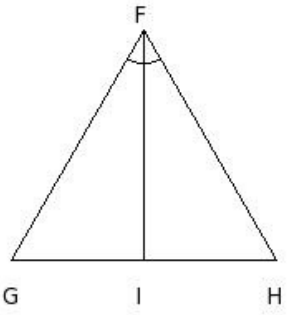
(i) {c,d} (ii) {a,d,e} (iii) {b,c,e} (iv) {b,a} (v) {b,a,d}

12. With the given data in the figure, △LMN ≅ △NOL by which property?



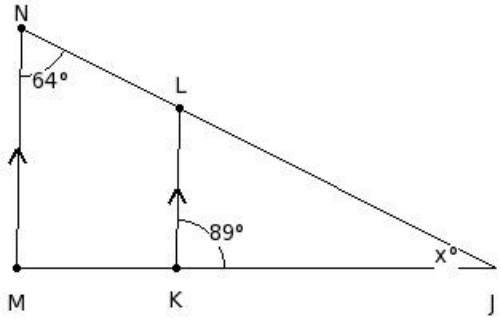
(i) RHS Congruency (ii) SAS Congruency (iii) ASA Congruency (iv) SSS Congruency (v) not congruent

13. With the data in the figure, △FIG ≅ △FIH by which property?



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

14. In the given figure, it is given that LK ∥ NM , ∠LNM = 64° and ∠LKJ = 89°. Find the value of x.

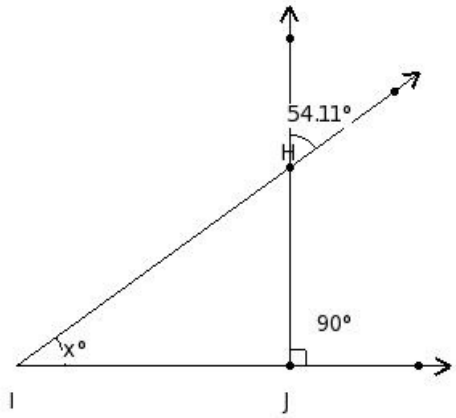


(i) x=27° (ii) x=29° (iii) x=25° (iv) x=26° (v) x=28°

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

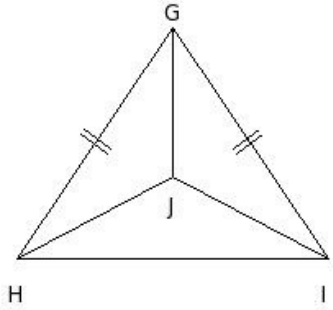
(i) 47° (ii) 43° (iii) 46° (iv) 45° (v) 44°

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



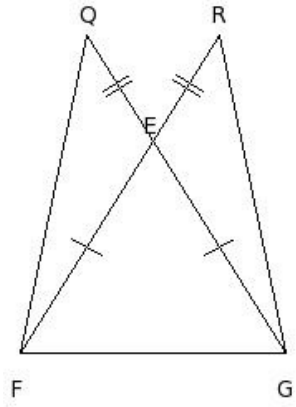
(i) x=37.89° (ii) x=34.89° (iii) x=36.89° (iv) x=35.89° (v) x=33.89°

17. With the data in the figure, △GHJ ≅ △GIJ by which property?



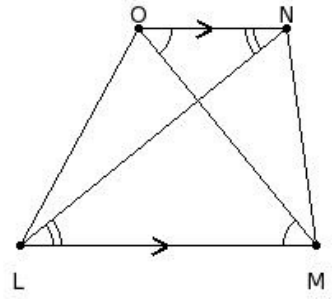
(i) RHS Congruency (ii) ASA Congruency (iii) SAS Congruency (iv) not congruent (v) SSS Congruency

18. With the data in the given figure, △QFG ≅ △RGF by which property?



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

19. With the data in the given figure, △LMO ≅ △MLN by which property?



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

20. Which of the following are true?

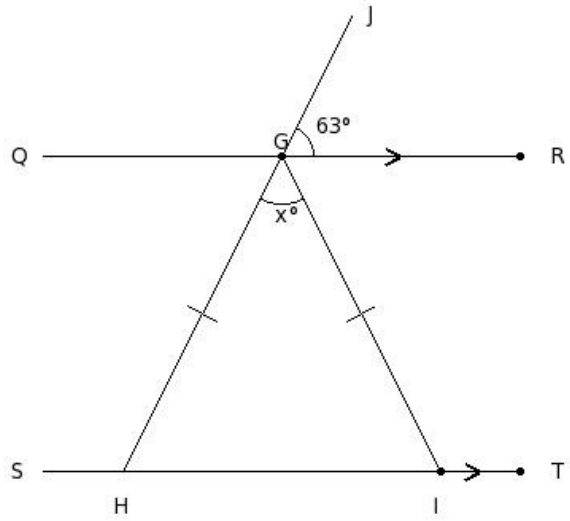
a) A circle is a polygonal region.
b) A semi-circle is a polygonal region.
c) A triangle is a polygonal region.
d) A sector is a polygonal region.
e) A square is a polygonal region.

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

21. The point of intersection of the bisectors of the interior angle and the two exterior opposite angles of a triangle is called

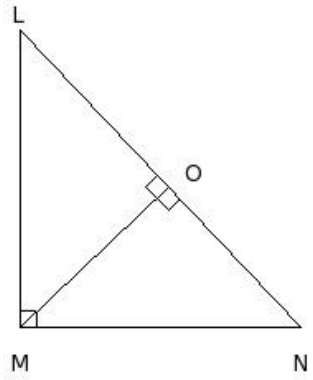
(i) centroid (ii) circumcentre (iii) altitude (iv) incentre (v) excentre

22. In the given figure, QR ∥ ST, ∠JGR = 63° and GH = IG. Find the measure of x.



(i) x=53° (ii) x=54° (iii) x=55° (iv) x=52° (v) x=56°

23. With the data in the figure, △LOM ≅ △NOM by which property?



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

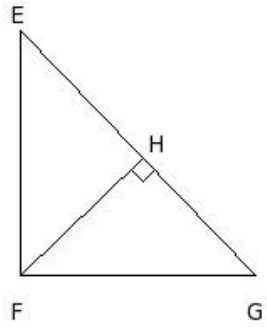
24. Which of the following are measures of a scalene triangle ?

(i) HI = 12 cm , IJ = 12 cm , JH = 16.97 cm (ii) HI = 10 cm , IJ = 12 cm , JH = 13 cm

(iii) HI = 12 cm , IJ = 15 cm , JH = 12 cm (iv) HI = 14 cm , IJ = 14 cm , JH = 14 cm

(v) HI = 15 cm , IJ = 12 cm , JH = 15 cm

25. With the data in the figure, △EFH ≅ △GFH by which property?



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

Assignment Key

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