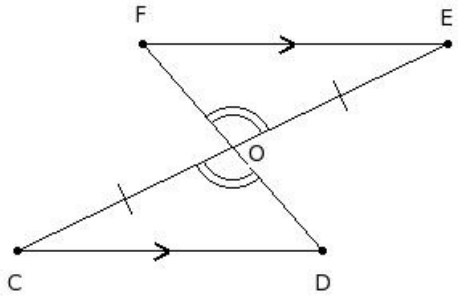
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Triangles

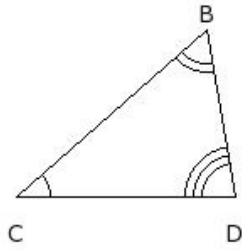
Grade : ICSE Grade VIII

1. With the data in the given figure, △OFE ≅ △ODC by which property?



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

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

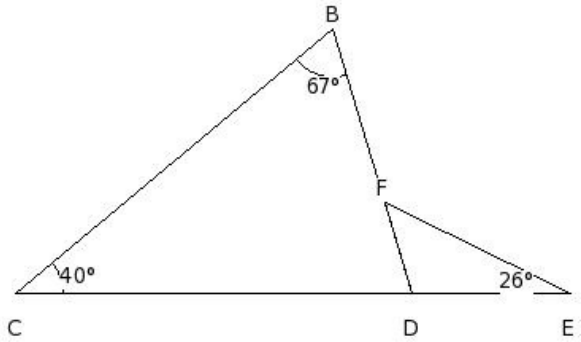


(i) ∠B = 81.08° , ∠C = 49.46° , ∠D = 49.46° (ii) ∠B = 58.67° , ∠C = 41.08° , ∠D = 80.25°

(iii) ∠B = 60° , ∠C = 60° , ∠D = 60° (iv) ∠B = 45° , ∠C = 90° , ∠D = 45°

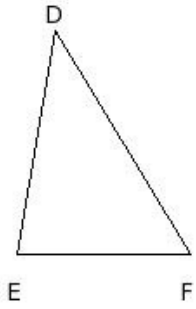
(v) ∠B = 47.16° , ∠C = 66.42° , ∠D = 66.42°

3. In the given figure, find ∠BFE



(i) 134° (ii) 133° (iii) 135° (iv) 132° (v) 131°

4. The vertex opposite to the side $\overline{EF}$



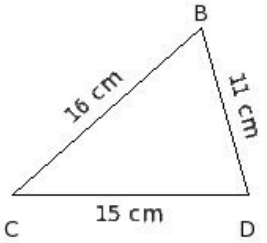
(i) E (ii) D (iii) $\overline{FG}$ (iv) H

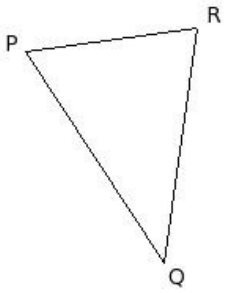
5. If all the three angles of a triangle are of the same measure, find the measure of each of the angles.

(i) 60° (ii) 62° (iii) 59° (iv) 58° (v) 61°

6. In the given figure, △BCD ≅ △PQR. Which of the following are true?

a) RP = 16 cm
b) PQ = 15 cm
c) QR = 16 cm
d) QR = 15 cm
e) PQ = 16 cm
f) RP = 11 cm



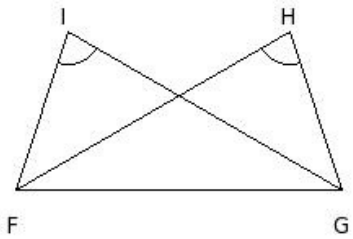


(i) {c,a,f} (ii) {b,d,e} (iii) {a,d} (iv) {d,e,f} (v) {b,e}

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

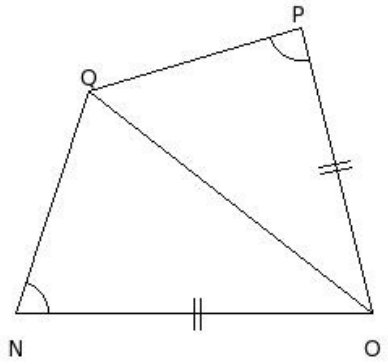
(i) 47° (ii) 44° (iii) 43° (iv) 45° (v) 46°

8. With the data in the figure, △FGI ≅ △GFH by which property?



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

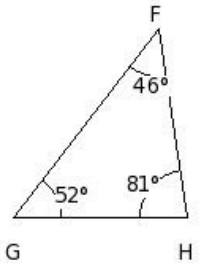
9. With the data in the given figure, △NOQ ≅ △POQ by which property?

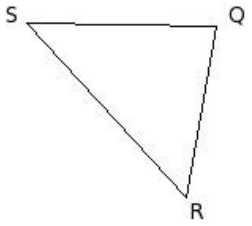


(i) SAS Congruency (ii) ASA Congruency (iii) RHS Congruency (iv) SSS Congruency (v) not congruent

10. In the given figure, △FGH ≅ △SRQ. Which of the following are true?

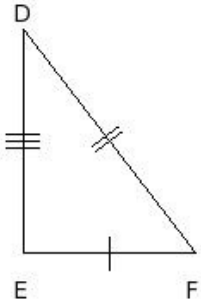
a) ∠Q = 81°
b) ∠R = 52°
c) ∠S = 46°
d) ∠S = 52°
e) ∠R = 81°
f) ∠Q = 46°





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

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

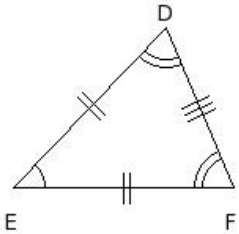


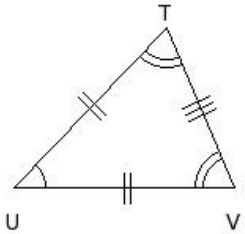
(i) DE = 10 cm , EF = 10 cm , FD = 10 cm (ii) DE = 13 cm , EF = 10 cm , FD = 14 cm

(iii) DE = 13 cm , EF = 10 cm , FD = 16.4 cm (iv) DE = 11 cm , EF = 13 cm , FD = 12 cm

(v) DE = 14 cm , EF = 24 cm , FD = 14 cm

12. In the given figure, which of the following is true?





(i) △DEF ≅ △TUV (ii) △EFD ≅ △TUV (iii) △DEF ≅ △UVT (iv) △DEF ≅ △VUT (v) △DEF ≅ △VTU

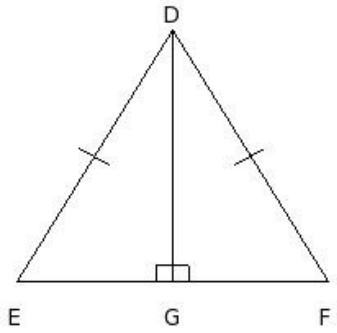
13. Which of the following are measures of an equilateral triangle ?

(i) OP = 15 cm , PQ = 15 cm , QO = 21.21 cm (ii) OP = 13 cm , PQ = 11 cm , QO = 13 cm

(iii) OP = 12 cm , PQ = 12 cm , QO = 12 cm (iv) OP = 12 cm , PQ = 14 cm , QO = 11 cm

(v) OP = 13 cm , PQ = 14 cm , QO = 19.1 cm

14. With the data in the given figure, △DEG ≅ △DFG by which property?



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

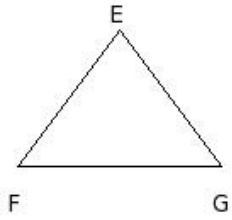
15. Find the measures of the three sides suitable to form a triangle?

(i) PQ = 6 cm , QR = 19 cm , RP = 5 cm (ii) PQ = 19 cm , QR = 8 cm , RP = 10 cm

(iii) PQ = 12 cm , QR = 11 cm , RP = 14 cm (iv) PQ = 20 cm , QR = 8 cm , RP = 7 cm

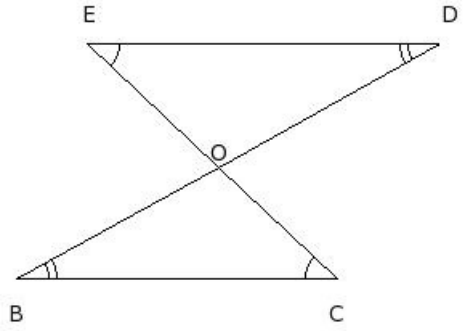
(v) PQ = 7 cm , QR = 18 cm , RP = 8 cm

16. The side opposite to the vertex E



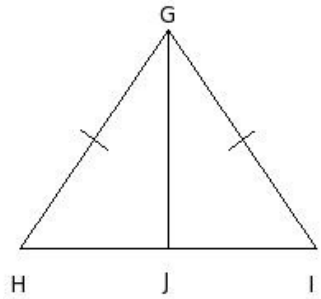
(i) $\overline{GE}$ (ii) $\overline{EI}$ (iii) $\overline{FG}$ (iv) $\overline{HF}$ (v) $\overline{EF}$

17. With the data in the figure, △BOC ≅ △DOE by which property?



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

18. In the given figure, △GHI is a triangle in which GH = GI and J is a point on HI. Then



(i) $GH^2 - GJ^2 = GJ.HJ$ (ii) $GH^2 + GJ^2 = HJ.IJ$ (iii) $GH^2 - GJ^2 = GJ.IJ$ (iv) $GH^2 - GJ^2 = HJ.IJ$

(v) $GH^2 + GJ^2 = HI^2$

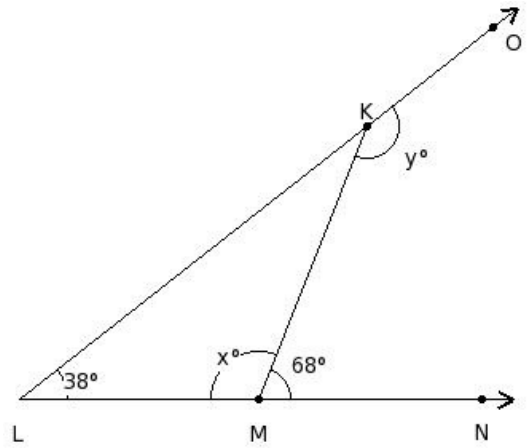
19. Which of the following are measures of an isosceles triangle ?

(i) LM = 15 cm , MN = 15 cm , NL = 15 cm (ii) LM = 11 cm , MN = 14 cm , NL = 17.8 cm

(iii) LM = 11 cm , MN = 13 cm , NL = 11 cm (iv) LM = 14 cm , MN = 11 cm , NL = 13 cm

(v) LM = 11 cm , MN = 13 cm , NL = 14 cm

20. Find the unknown marked angles in the following figure



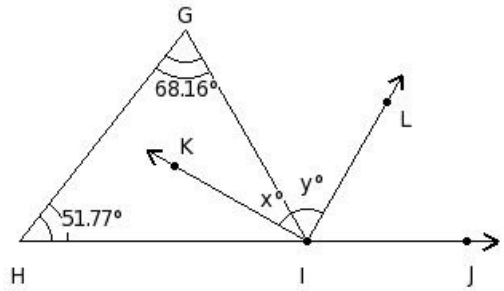
(i) x=113°,y=151° (ii) x=114°,y=152° (iii) x=110°,y=148° (iv) x=112°,y=150° (v) x=111°,y=149°

21. 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=44°,C=74° (iii) B=46°,C=76° (iv) B=47°,C=77° (v) B=43°,C=73°

In the given figure, ∠G = 68.16° and ∠H = 51.77°.

22. Side HI is produced to J, so that ∠HIG and ∠GIJ form a linear pair.
If $\overrightarrow{IK}$ and $\overrightarrow{IL}$ are the bisectors of ∠HIG and ∠GIJ, find x and y.



(i) x=32.03°,y=61.97° (ii) x=31.04°,y=60.97° (iii) x=30.04°,y=59.97° (iv) x=28.04°,y=57.97°

(v) x=29.04°,y=58.97°

23. 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?

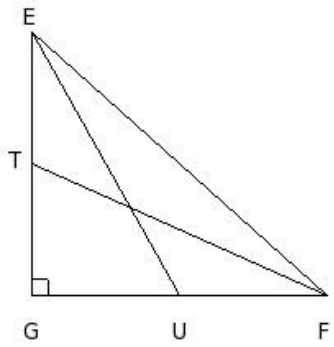
a) $4\,FT^2 = 4\,EG^2 + FG^2$

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

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

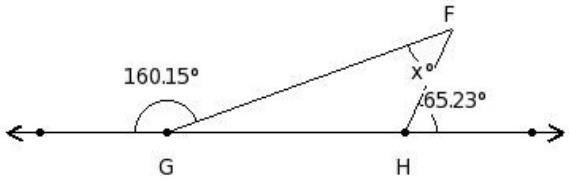
d) $4\,(EU^2 + FT^2) = 5\,EF^2$

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



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

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



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

25. How many diagonals does a triangle have?

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

Assignment Key

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