EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Triangles

Grade : ICSE Grade VIII

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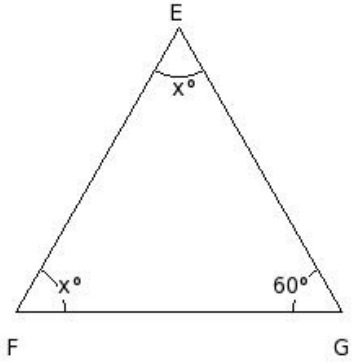
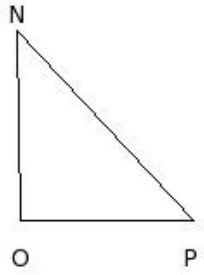
1. Find the unknown angles in the following figure



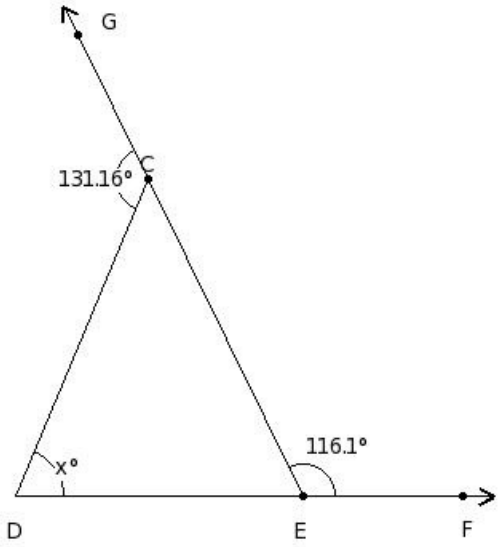
(i) E=58°,F=58° (ii) E=62°,F=62° (iii) E=61°,F=61° (iv) E=59°,F=59° (v) E=60°,F=60°

2. The vertex opposite to the side $\overline{OP}$



(i) N (ii) O (iii) $\overline{PQ}$ (iv) R

3. Find the unknown marked angle in the following figure



(i) x=69.26° (ii) x=68.26° (iii) x=65.26° (iv) x=67.26° (v) x=66.26°

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

(i) EF = 12 cm , FG = 22 cm , GE = 15 cm (ii) EF = 14 cm , FG = 14 cm , GE = 14 cm

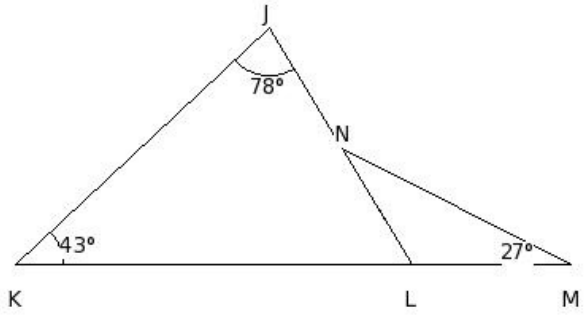
(iii) EF = 11 cm , FG = 11 cm , GE = 15.56 cm (iv) EF = 10 cm , FG = 15 cm , GE = 14 cm

(v) EF = 12 cm , FG = 14 cm , GE = 13 cm

5. A vehicle goes 10 km West and then 15 km North. How far is it from its starting point ?

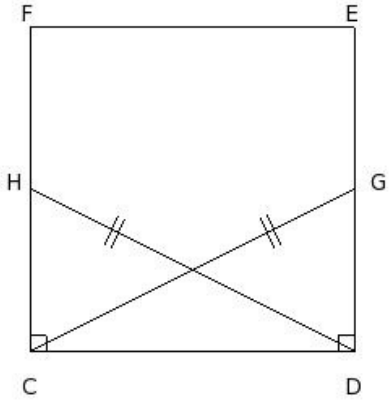
(i) 19.03 km (ii) 16.03 km (iii) 18.03 km (iv) 20.03 km (v) 17.03 km

6. In the given figure, find ∠KLJ



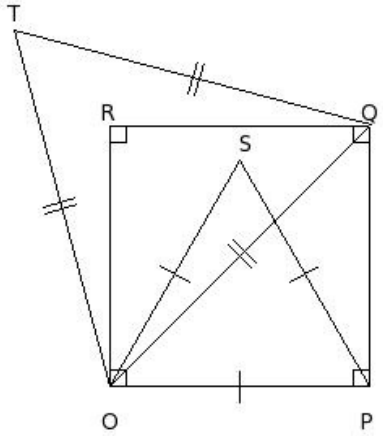
(i) 61° (ii) 58° (iii) 57° (iv) 59° (v) 60°

7. With the data in the given figure, △HCD ≅ △GDC by which property?



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

8. With the data in the figure, △OPS ≅ △OQT by which property?



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

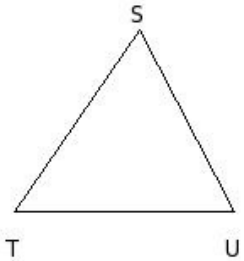
9. Which of the following are measures of an isosceles triangle ?

(i) LM = 13 cm , MN = 11 cm , NL = 13 cm (ii) LM = 13 cm , MN = 11 cm , NL = 10 cm

(iii) LM = 12 cm , MN = 10 cm , NL = 13 cm (iv) LM = 11 cm , MN = 11 cm , NL = 11 cm

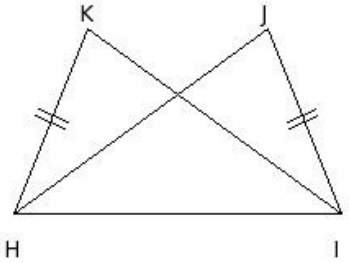
(v) LM = 10 cm , MN = 13 cm , NL = 16.4 cm

10. The side opposite to the vertex U



(i) $\overline{TU}$ (ii) $\overline{US}$ (iii) $\overline{ST}$ (iv) $\overline{SW}$ (v) $\overline{VT}$

11. With the data in the figure, △HKI ≅ △IJH by which property?



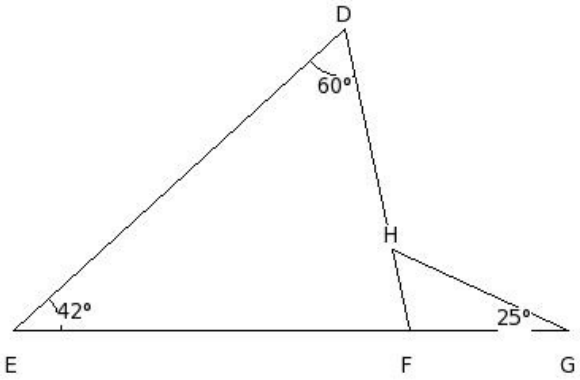
(i) SSS Congruency (ii) not congruent (iii) ASA Congruency (iv) RHS Congruency (v) SAS Congruency

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

(i) A=118°,B=32°,C=30° (ii) A=122°,B=30°,C=28° (iii) A=120°,B=30°,C=30°

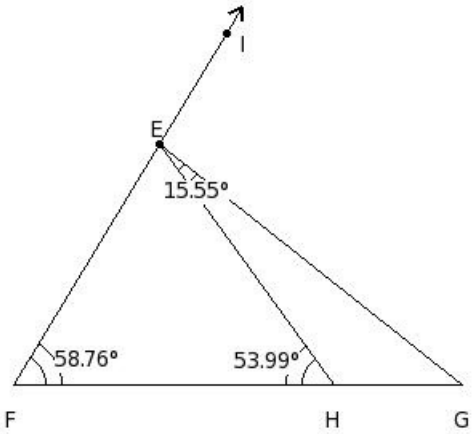
(iv) A=120°,B=28°,C=32° (v) A=118°,B=30°,C=32°

13. In the given figure, find ∠DHG



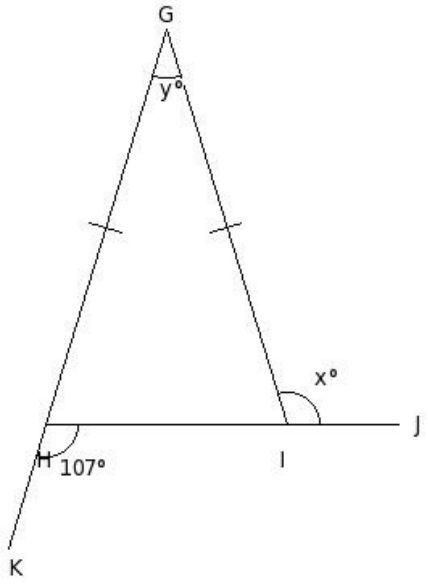
(i) 127° (ii) 128° (iii) 129° (iv) 125° (v) 126°

14. In below given figure, find ∠HEF



(i) 69.25° (ii) 66.25° (iii) 68.25° (iv) 67.25° (v) 65.25°

15. Find the unknown marked angles in the following figure



(i) x=105°,y=32° (ii) x=109°,y=36° (iii) x=108°,y=35° (iv) x=106°,y=33° (v) x=107°,y=34°

16. In the given figure, △BCD, BE ⊥ CD. Which of the following are true?

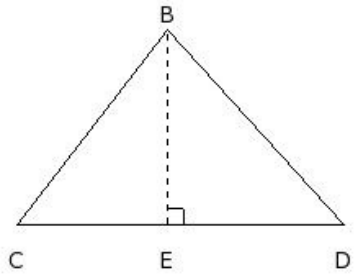
a) $BC^2 + BD^2 = CE^2 + DE^2$

b) $BC^2 - BD^2 = CE^2 - DE^2$

c) $BE^2 = 2CE.DE$

d) $BC^2 + CE^2 = BD^2 + DE^2$

e) $BC^2 - CE^2 = BD^2 - DE^2$



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

17. One of the two equal angles of an isosceles triangle measures 51°. Find the measure of each angle of the triangle.

(i) A=51°,B=51°,C=78° (ii) A=53°,B=51°,C=76° (iii) A=49°,B=51°,C=80° (iv) A=51°,B=49°,C=80°

(v) A=49°,B=53°,C=78°

18. In a right-angled triangle if one of the acute angles is 40°, find the measure of the other acute angle.

(i) 51° (ii) 49° (iii) 50° (iv) 52° (v) 48°

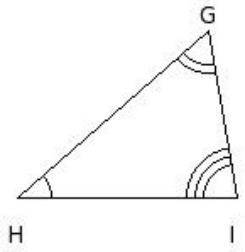
19. In a right-angled triangle, the two acute angles are in the ratio 13 : 5. Find these angles.

(i) A=67°,C=27° (ii) A=63°,C=23° (iii) A=65°,C=25° (iv) A=66°,C=26° (v) A=64°,C=24°

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

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

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

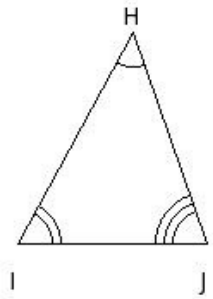


(i) ∠G = 94.94° , ∠H = 36.71° , ∠I = 48.35° (ii) ∠G = 45° , ∠H = 90° , ∠I = 45°

(iii) ∠G = 36.25° , ∠H = 90° , ∠I = 53.75° (iv) ∠G = 114.22° , ∠H = 31.41° , ∠I = 34.37°

(v) ∠G = 58.67° , ∠H = 41.08° , ∠I = 80.25°

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

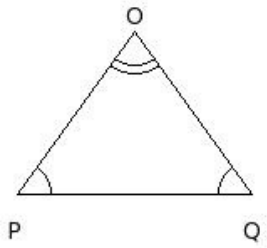


(i) ∠H = 60° , ∠I = 60° , ∠J = 60° (ii) ∠H = 54.56° , ∠I = 62.72° , ∠J = 62.72°

(iii) ∠H = 77.36° , ∠I = 51.32° , ∠J = 51.32° (iv) ∠H = 47.91° , ∠I = 61.28° , ∠J = 70.81°

(v) ∠H = 45° , ∠I = 90° , ∠J = 45°

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

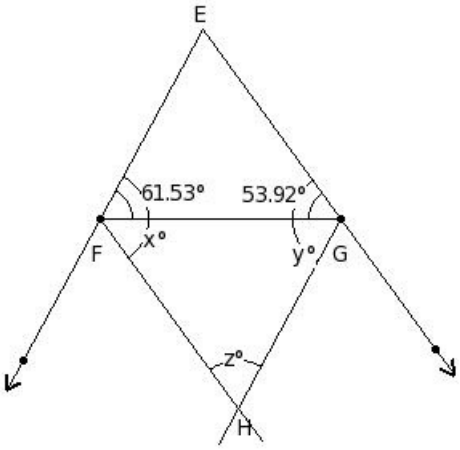


(i) ∠O = 42.71° , ∠P = 90° , ∠Q = 47.29° (ii) ∠O = 73.62° , ∠P = 56.25° , ∠Q = 50.13°

(iii) ∠O = 60° , ∠P = 60° , ∠Q = 60° (iv) ∠O = 71.38° , ∠P = 54.31° , ∠Q = 54.31°

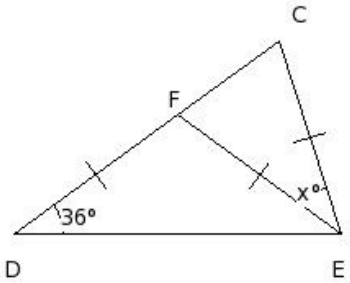
(v) ∠O = 91.04° , ∠P = 47.16° , ∠Q = 41.8°

24. In the given figure, △EFG in which ∠F = 61.53° and ∠G = 53.92°. EH and FG bisects each other. Find the value of z



(i) z=62.55° (ii) z=65.55° (iii) z=63.55° (iv) z=64.55° (v) z=66.55°

25. In the given figure, if EC = EF = FD, find the value of x



(i) x=38° (ii) x=36° (iii) x=34° (iv) x=37° (v) x=35°

Assignment Key

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

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