EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Triangles

Grade : ICSE Grade IX

1. In the given figure, which pair of triangles are not congruent ?

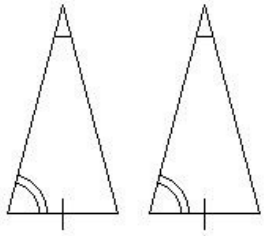


fig 3

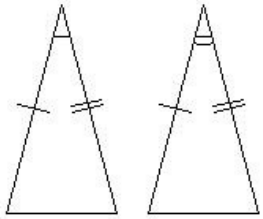


fig 4

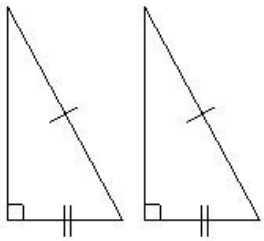


fig 1

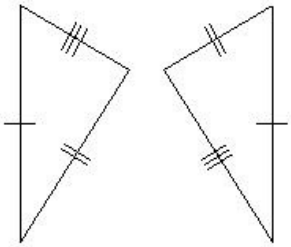
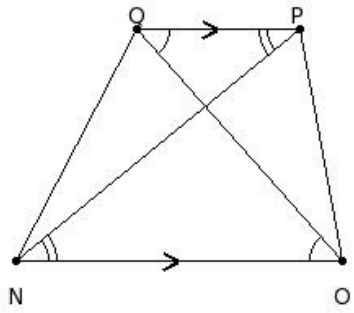


fig 2

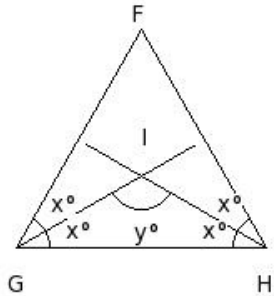
(i) fig 2 (ii) fig 3 (iii) fig 1 (iv) fig 4

2. With the data in the given figure, △NOQ ≅ △ONP by which property?



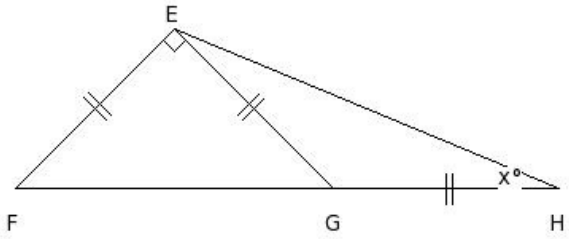
(i) SSS Congruency (ii) ASA Congruency (iii) not congruent (iv) RHS Congruency (v) SAS Congruency

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



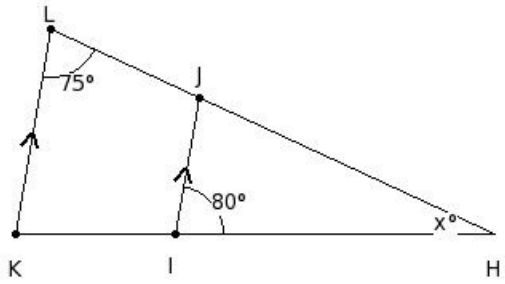
(i) 122° (ii) 118° (iii) 121° (iv) 120° (v) 119°

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



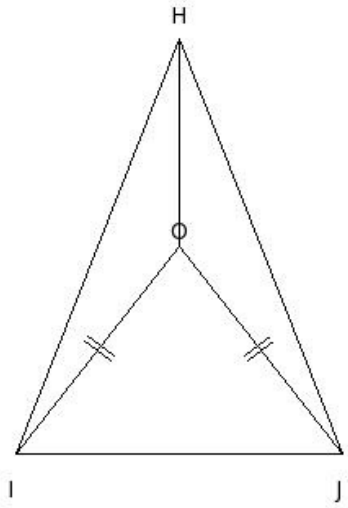
(i) x=20.5° (ii) x=22.5° (iii) x=23.5° (iv) x=21.5° (v) x=24.5°

5. In the given figure, it is given that JI ∥ LK , ∠JLK = 75° and ∠JIH = 80°. Find the value of x.



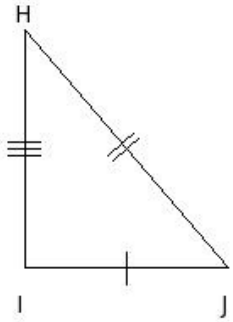
(i) x=26° (ii) x=24° (iii) x=25° (iv) x=27° (v) x=23°

6. With the data in the given figure, △HOI ≅ △HOJ by which property?



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

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



(i) HI = 14 cm , IJ = 12 cm , JH = 13 cm (ii) HI = 11 cm , IJ = 11 cm , JH = 11 cm

(iii) HI = 10 cm , IJ = 21 cm , JH = 13 cm (iv) HI = 14 cm , IJ = 12 cm , JH = 18.44 cm

(v) HI = 14 cm , IJ = 10 cm , JH = 12 cm

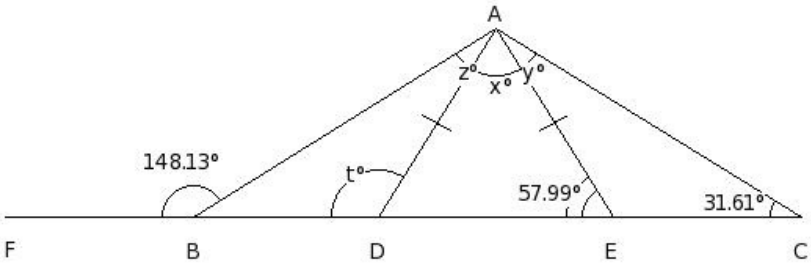
8. Which of the following are measures of an isosceles triangle ?

(i) $\angle F = 48.74°$, $\angle G = 69.98°$, $\angle H = 61.28°$ (ii) $\angle F = 51.84°$, $\angle G = 90°$, $\angle H = 38.16°$

(iii) $\angle F = 64.78°$, $\angle G = 57.61°$, $\angle H = 57.61°$ (iv) $\angle F = 60°$, $\angle G = 60°$, $\angle H = 60°$

(v) $\angle F = 53.13°$, $\angle G = 67.38°$, $\angle H = 59.49°$

9. In the given figure, if AD = EA, find the values of x , y , z and t



(i) x =64.02°, y =26.38°, z =26.12° , t =122.01° (ii) x =64.02°, y =24.38°, z =24.12° , t =122.01°

(iii) x =64.02°, y =28.38°, z =28.12° , t =122.01° (iv) x =64.02°, y =26.38°, z =27.12° , t =123.01°

(v) x =64.02°, y =26.38°, z =25.12° , t =121.01°

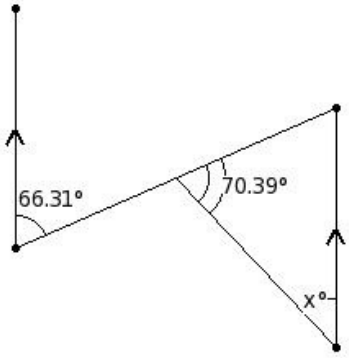
10. Which of the following are measures of an isosceles right angled triangle ?

(i) HI = 15 cm , IJ = 15 cm , JH = 21.21 cm (ii) HI = 10 cm , IJ = 15 cm , JH = 11 cm

(iii) HI = 11 cm , IJ = 18 cm , JH = 13 cm (iv) HI = 12 cm , IJ = 12 cm , JH = 12 cm

(v) HI = 10 cm , IJ = 15 cm , JH = 14 cm

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



(i) x=41.3° (ii) x=44.3° (iii) x=42.3° (iv) x=45.3° (v) x=43.3°

12. In the given figure, which pair of triangles are not congruent ?

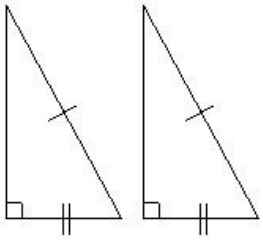


fig 3

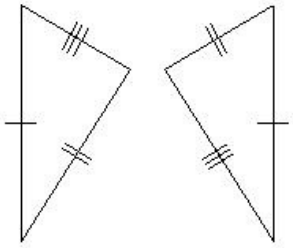


fig 4

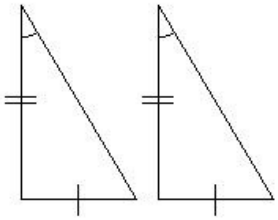


fig 1

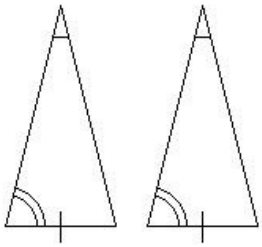
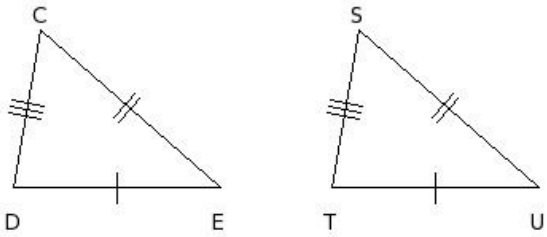


fig 2

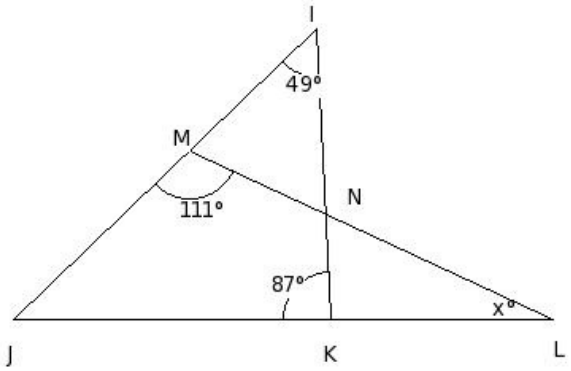
(i) fig 3 (ii) fig 1 (iii) fig 2 (iv) fig 4

13. Identify the property by which the two given triangles are congruent



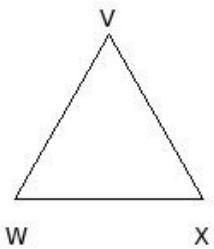
(i) RHS Congruency (ii) SAS Congruency (iii) ASA Congruency (iv) SSS Congruency

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



(i) x=27° (ii) x=26° (iii) x=24° (iv) x=23° (v) x=25°

15. The side opposite to the vertex V



(i) $\overline{VW}$ (ii) $\overline{VZ}$ (iii) $\overline{XV}$ (iv) $\overline{YW}$ (v) $\overline{WX}$

16. In the given figure, points D , E and F are the mid-points of sides BC, CA and AB of △ABC. Which of the following are true?

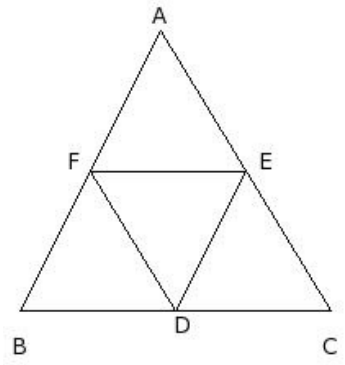
a) Area of trapezium BCEF is $\frac{1}{4}$ the area of △ABC

b) Area of △ABC = 4 times area of △DEF

c) Area of △ABC = $\frac{1}{3}$ area of △DEF

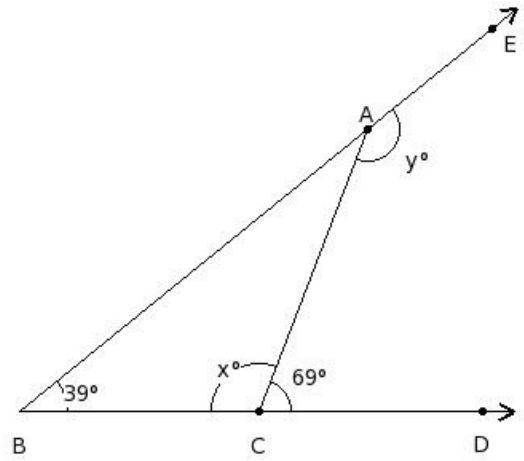
d) Area of trapezium BCEF is thrice the area of △AFE

e) All four small triangles have equal areas



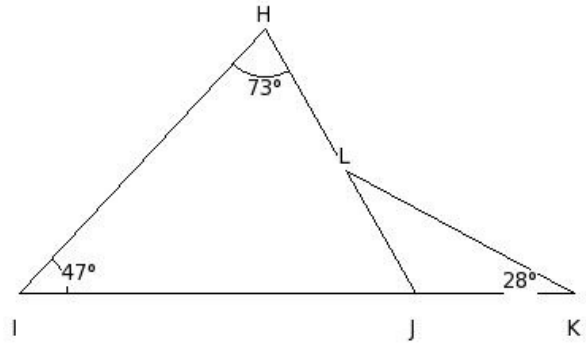
(i) {b,d,e} (ii) {a,c,e} (iii) {c,d} (iv) {a,b} (v) {a,b,d}

17. Find the unknown marked angles in the following figure



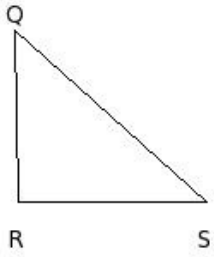
(i) x=111°,y=150° (ii) x=113°,y=152° (iii) x=109°,y=148° (iv) x=110°,y=149° (v) x=112°,y=151°

18. In the given figure, find ∠KLJ



(i) 33° (ii) 30° (iii) 34° (iv) 32° (v) 31°

19. The side opposite to the vertex R



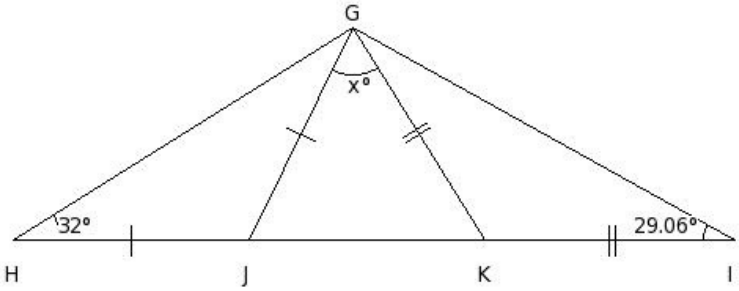
(i) $\overline{SQ}$ (ii) $\overline{QU}$ (iii) $\overline{TR}$ (iv) $\overline{RS}$ (v) $\overline{QR}$

20. Which of the following are true?

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

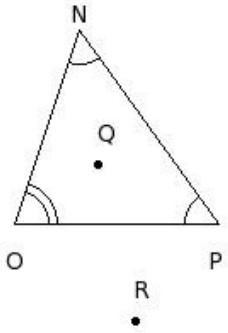
(i) {b,a} (ii) {a,d,e} (iii) {b,a,d} (iv) {b,c,e} (v) {c,d}

21. In the given figure, if JG = HJ and GK = KI , find the value of x.



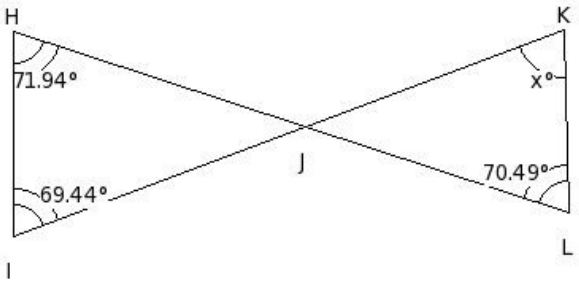
(i) x=55.88° (ii) x=58.88° (iii) x=57.88° (iv) x=59.88° (v) x=56.88°

22. The angles of the triangle are



(i) ∠O , ∠P , ∠R (ii) ∠N , ∠O , ∠Q (iii) ∠P , ∠Q , ∠R (iv) ∠O , ∠P , ∠Q (v) ∠N , ∠O , ∠P

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



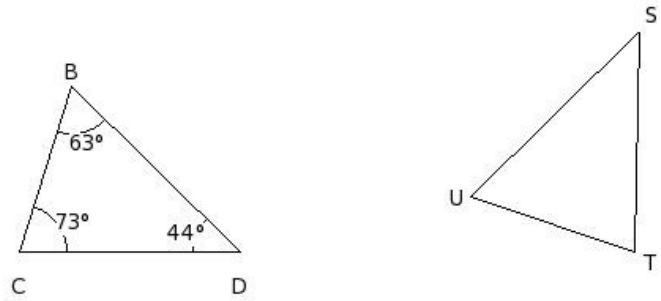
(i) x=72.89° (ii) x=69.89° (iii) x=68.89° (iv) x=70.89° (v) x=71.89°

24. The line joining each vertex to the mid-point of the opposite side of a triangle is called

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

25. In the given figure, △BCD ≅ △UTS. Which of the following are true?

a) ∠U = 73°
b) ∠S = 44°
c) ∠S = 63°
d) ∠T = 73°
e) ∠U = 63°
f) ∠T = 44°



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

Assignment Key

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