

EduSahara™ Learning Center Assignment

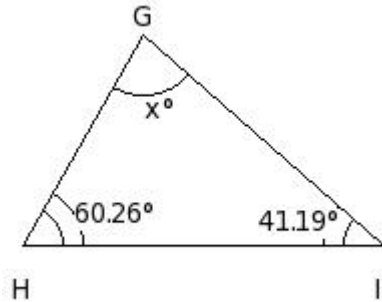
Grade : Class VII, SSC

Chapter : Triangles and Its Properties

Name : Triangle Interior Angle Properties using Diagrams

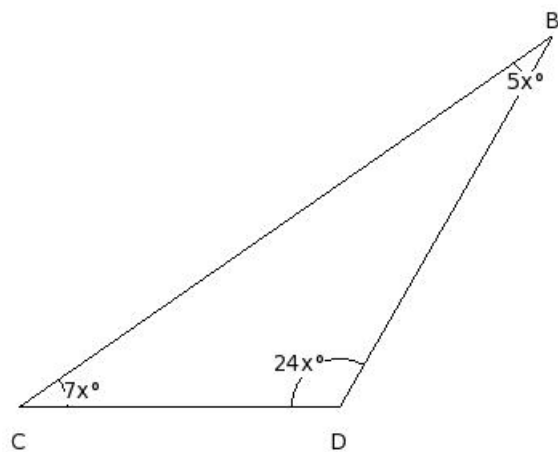
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1. Find the unknown angle from the following figure



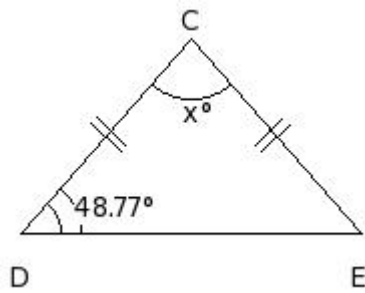
- (i) $x = 76.55^\circ$ (ii) $x = 77.55^\circ$ (iii) $x = 80.55^\circ$ (iv) $x = 79.55^\circ$ (v) $x = 78.55^\circ$

2. Find the angles of the triangle



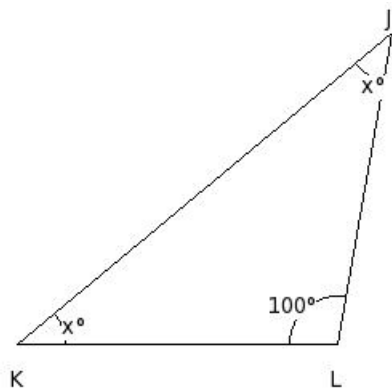
- (i) $B = 23^\circ, C = 37^\circ, D = 120^\circ$
(ii) $B = 25^\circ, C = 35^\circ, D = 120^\circ$
(iii) $B = 23^\circ, C = 35^\circ, D = 122^\circ$
(iv) $B = 27^\circ, C = 35^\circ, D = 118^\circ$
(v) $B = 25^\circ, C = 33^\circ, D = 122^\circ$

3. Calculate the value of x in the following figure



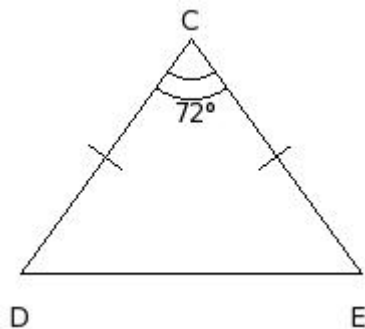
- (i) $x = 84.46^\circ$ (ii) $x = 82.46^\circ$ (iii) $x = 81.46^\circ$
 (iv) $x = 80.46^\circ$ (v) $x = 83.46^\circ$

4. Find the unknown angles in the following figure



- (i) $J = 39^\circ, K = 39^\circ$
 (ii) $J = 42^\circ, K = 42^\circ$
 (iii) $J = 40^\circ, K = 40^\circ$
 (iv) $J = 38^\circ, K = 38^\circ$
 (v) $J = 41^\circ, K = 41^\circ$

5. In the given triangle, $\angle C = 72^\circ$. Find the measure of $\angle D$ and $\angle E$

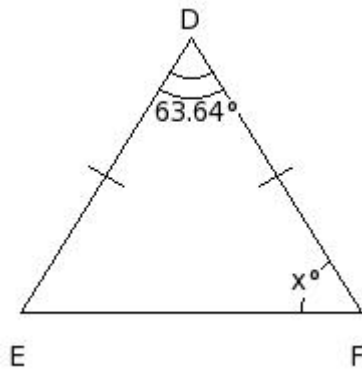


- (i) $\angle D = \angle E = 54^\circ$
 (ii) $\angle D = \angle E = 56^\circ$
 (iii) $\angle D = \angle E = 55^\circ$

(iv) $\angle D = \angle E = 52^\circ$

(v) $\angle D = \angle E = 53^\circ$

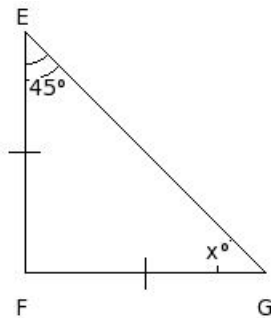
6. Find the unknown angle in the following figure



(i) $x = 56.18^\circ$ (ii) $x = 57.18^\circ$ (iii) $x = 58.18^\circ$

(iv) $x = 59.18^\circ$ (v) $x = 60.18^\circ$

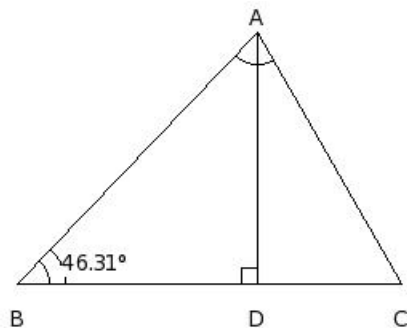
7. Find the unknown angle in the following figure



(i) $x = 44^\circ$ (ii) $x = 45^\circ$ (iii) $x = 46^\circ$

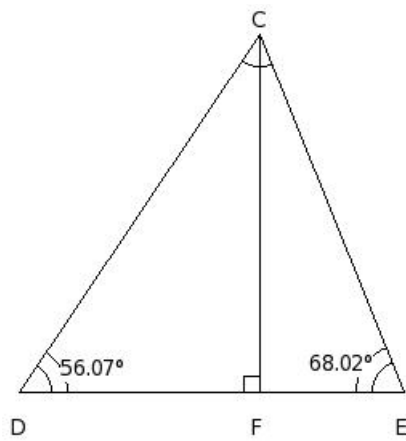
(iv) $x = 47^\circ$ (v) $x = 43^\circ$

8. In the given figure, if $DA \perp BC$ and $\angle ABD = 46.31^\circ$, find $\angle DAB$



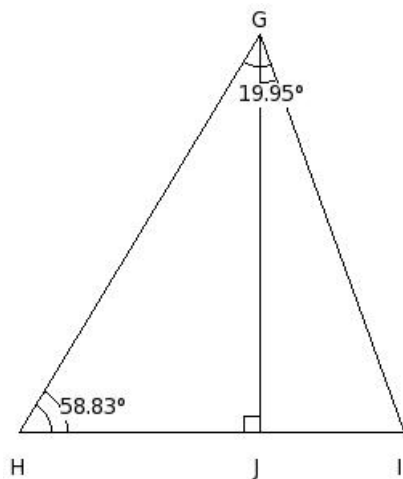
(i) 41.69° (ii) 43.69° (iii) 44.69° (iv) 45.69° (v) 42.69°

9. In the given figure, if $FC \perp DE$ and $\angle CDF = 56.07^\circ$, find $\angle ECF$



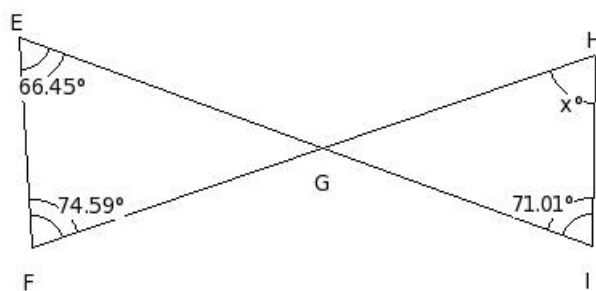
- (i) 19.98° (ii) 23.98° (iii) 22.98° (iv) 20.98° (v) 21.98°

10. In the given figure, if $JG \perp HI$ and $\angle GHJ = 58.83^\circ$, find $\angle JIG$



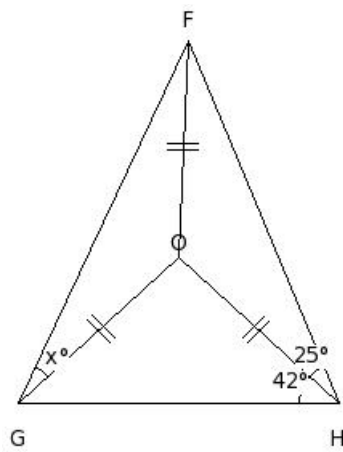
- (i) 69.05° (ii) 70.05° (iii) 71.05° (iv) 72.05° (v) 68.05°

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



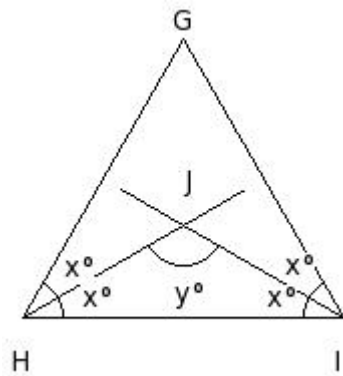
- (i) $x = 72.03^\circ$ (ii) $x = 68.03^\circ$ (iii) $x = 69.03^\circ$
 (iv) $x = 70.03^\circ$ (v) $x = 71.03^\circ$

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



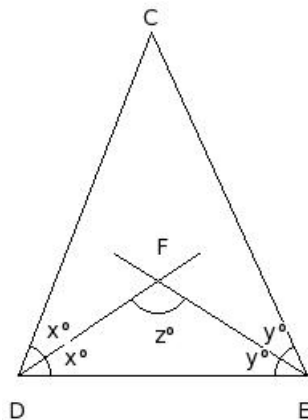
- (i) $x = 21^\circ$ (ii) $x = 22^\circ$ (iii) $x = 24^\circ$
 (iv) $x = 25^\circ$ (v) $x = 23^\circ$

13. 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) 122° (ii) 121° (iii) 119° (iv) 120° (v) 118°

14. In the given figure, $\triangle CDE$ is a triangle in which $\angle D = 68.8^\circ$ and $\angle E = 65.62^\circ$.
 If 'z' is the angle between the bisector of $\angle D$ and $\angle E$, then find z.

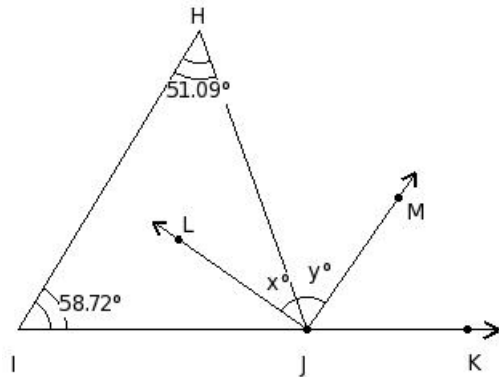


- (i) 113.79° (ii) 114.79° (iii) 112.79° (iv) 111.79° (v) 110.79°

In the given figure, $\angle H = 51.09^\circ$ and $\angle I = 58.72^\circ$.

15. Side IJ is produced to K, so that $\angle IJH$ and $\angle HJK$ form a linear pair.

If $\overrightarrow{JL}$ and $\overrightarrow{JM}$ are the bisectors of $\angle IJH$ and $\angle HJK$, find x and y .



(i) $x = 37.09^\circ, y = 56.91^\circ$

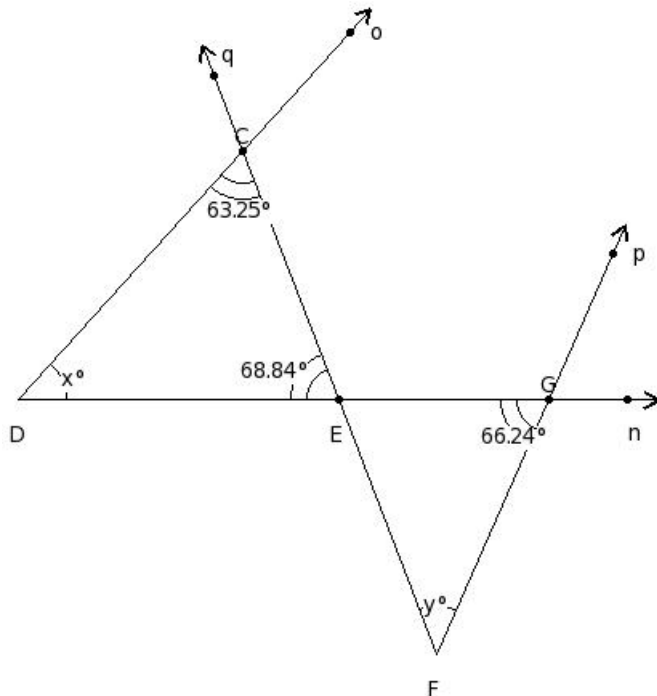
(ii) $x = 34.09^\circ, y = 53.91^\circ$

(iii) $x = 35.09^\circ, y = 54.91^\circ$

(iv) $x = 36.09^\circ, y = 55.91^\circ$

(v) $x = 33.09^\circ, y = 52.91^\circ$

16. In the given figure, find the values of x and y



(i) $x = 46.91^\circ, y = 43.92^\circ$

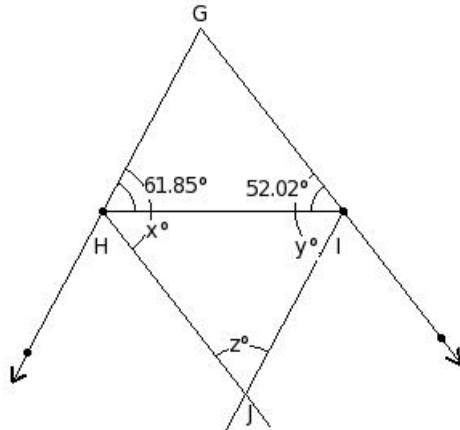
(ii) $x = 48.91^\circ, y = 45.92^\circ$

(iii) $x = 45.91^\circ, y = 42.92^\circ$

(iv) $x = 49.91^\circ$, $y = 46.92^\circ$

(v) $x = 47.91^\circ$, $y = 44.92^\circ$

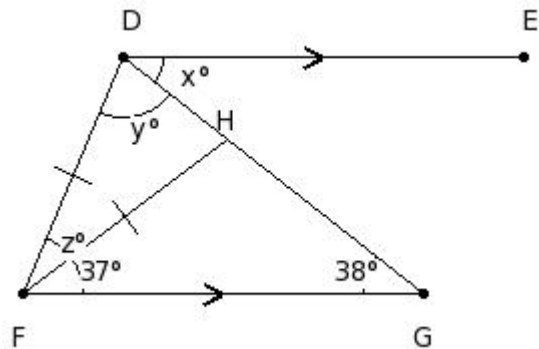
17. In the given figure, $\triangle GHI$ in which $\angle H = 61.85^\circ$ and $\angle I = 52.02^\circ$. GJ and HI bisect each other. Find the value of z



(i) $z = 66.13^\circ$ (ii) $z = 67.13^\circ$ (iii) $z = 65.13^\circ$

(iv) $z = 64.13^\circ$ (v) $z = 68.13^\circ$

18. In the given figure, $DE \parallel FG$ and $DF = FH$. Find the values of x, y and z .



(i) $x = 36^\circ$, $y = 77^\circ$, $z = 30^\circ$

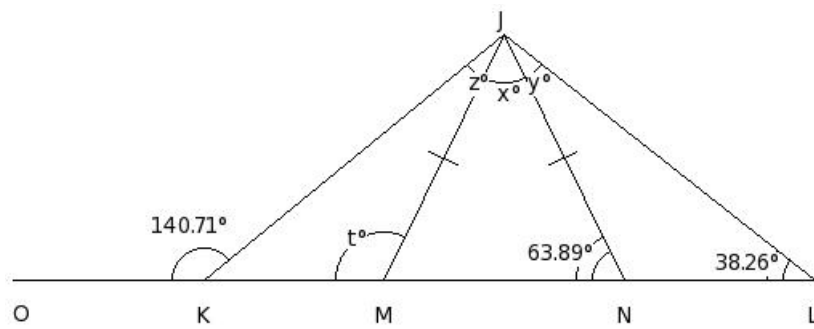
(ii) $x = 38^\circ$, $y = 73^\circ$, $z = 32^\circ$

(iii) $x = 36^\circ$, $y = 75^\circ$, $z = 32^\circ$

(iv) $x = 38^\circ$, $y = 75^\circ$, $z = 30^\circ$

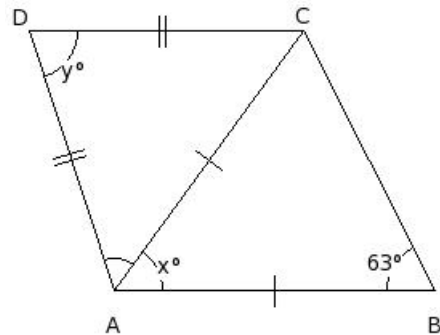
(v) $x = 40^\circ$, $y = 75^\circ$, $z = 28^\circ$

19. In the given figure, if $JM = NJ$, find the values of x, y, z and t



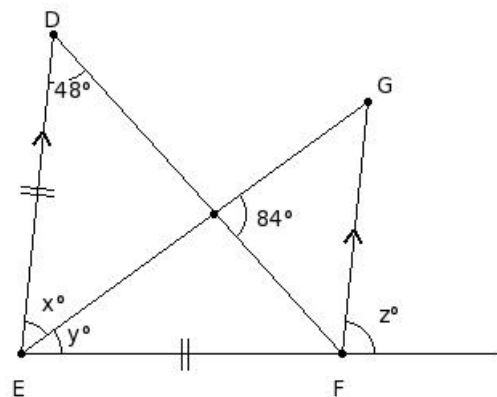
- (i) $x = 52.22^\circ$, $y = 23.63^\circ$, $z = 22.6^\circ$, $t = 116.11^\circ$
 (ii) $x = 52.22^\circ$, $y = 25.63^\circ$, $z = 24.6^\circ$, $t = 116.11^\circ$
 (iii) $x = 52.22^\circ$, $y = 25.63^\circ$, $z = 23.6^\circ$, $t = 115.11^\circ$
 (iv) $x = 52.22^\circ$, $y = 27.63^\circ$, $z = 26.6^\circ$, $t = 116.11^\circ$
 (v) $x = 52.22^\circ$, $y = 25.63^\circ$, $z = 25.6^\circ$, $t = 117.11^\circ$

20. In the following figure $AB \parallel DC$, find the values of x and y .



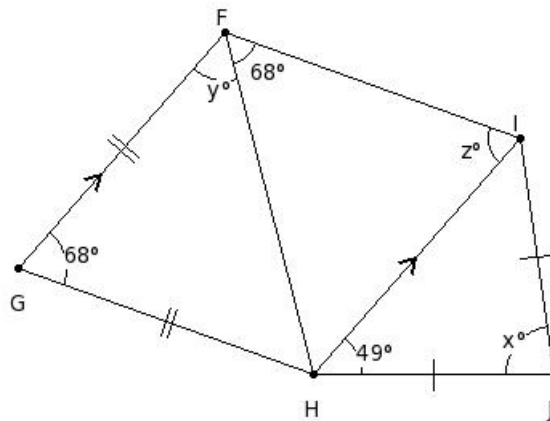
- (i) $x = 52^\circ$, $y = 70^\circ$
 (ii) $x = 54^\circ$, $y = 72^\circ$
 (iii) $x = 53^\circ$, $y = 71^\circ$
 (iv) $x = 55^\circ$, $y = 73^\circ$
 (v) $x = 56^\circ$, $y = 74^\circ$

21. In the given figure, find the values of x , y and z .



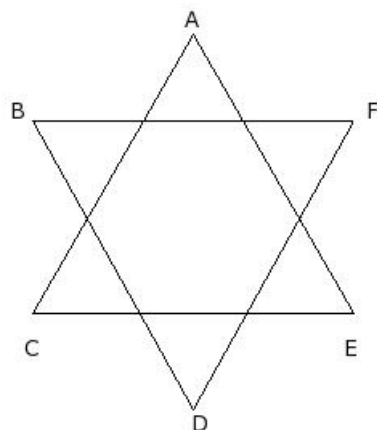
- (i) $x = 46^\circ, y = 38^\circ, z = 84^\circ$
- (ii) $x = 46^\circ, y = 36^\circ, z = 86^\circ$
- (iii) $x = 48^\circ, y = 36^\circ, z = 84^\circ$
- (iv) $x = 50^\circ, y = 36^\circ, z = 82^\circ$
- (v) $x = 48^\circ, y = 34^\circ, z = 86^\circ$

22. In the given figure, find the values of x, y and z .



- (i) $x = 82^\circ, y = 56^\circ, z = 68^\circ$
- (ii) $x = 84^\circ, y = 56^\circ, z = 66^\circ$
- (iii) $x = 80^\circ, y = 56^\circ, z = 70^\circ$
- (iv) $x = 82^\circ, y = 54^\circ, z = 70^\circ$
- (v) $x = 80^\circ, y = 58^\circ, z = 68^\circ$

23. In the given two equilateral triangles, find $\angle A + \angle C + \angle E + \angle B + \angle D + \angle F$.



- (i) 361° (ii) 362° (iii) 360° (iv) 358° (v) 359°

Assignment Key

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