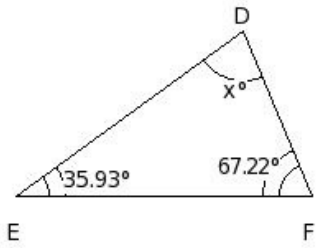
EduSahara™ Assignment

Name : Triangle Interior Angle Properties using Diagrams

Chapter : Triangles and Its Properties

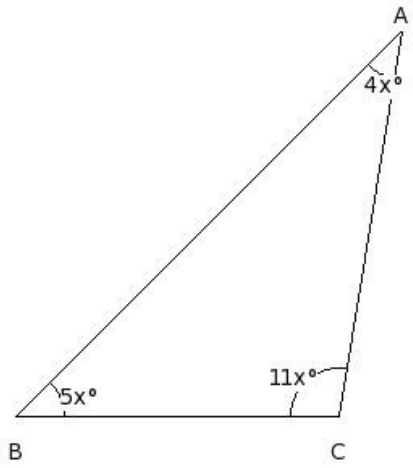
Grade : SSC Grade VII

1. Find the unknown angle from the following figure



(i) x=77.85° (ii) x=78.85° (iii) x=76.85° (iv) x=75.85° (v) x=74.85°

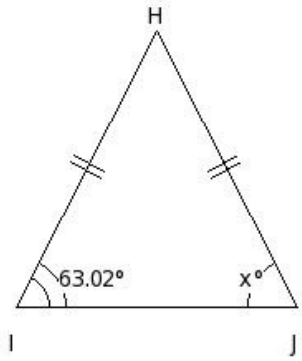
2. Find the angles of the triangle



(i) A=38°,B=45°,C=97° (ii) A=34°,B=47°,C=99° (iii) A=36°,B=43°,C=101° (iv) A=36°,B=45°,C=99°

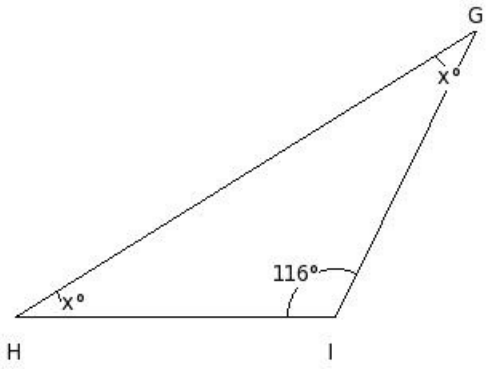
(v) A=34°,B=45°,C=101°

3. Calculate the value of x in the following figure



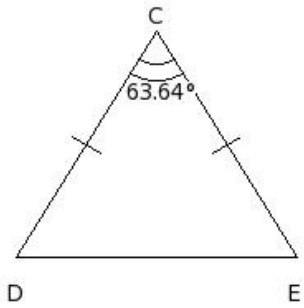
(i) x=63.02° (ii) x=65.02° (iii) x=61.02° (iv) x=64.02° (v) x=62.02°

4. Find the unknown angles in the following figure



(i) G=33°,H=33° (ii) G=32°,H=32° (iii) G=34°,H=34° (iv) G=31°,H=31° (v) G=30°,H=30°

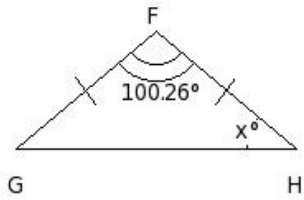
5. In the given triangle, ∠C = 63.64°. Find the measure of ∠D and ∠E



(i) ∠D = ∠E = 59.18° (ii) ∠D = ∠E = 58.18° (iii) ∠D = ∠E = 56.18° (iv) ∠D = ∠E = 60.18°

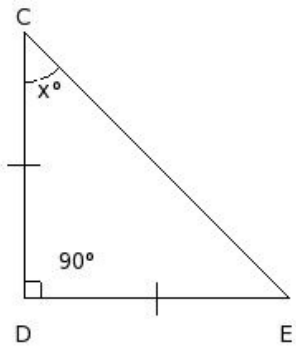
(v) ∠D = ∠E = 57.18°

6. Find the unknown angle in the following figure



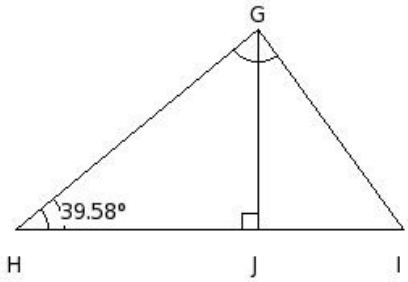
(i) x=41.87° (ii) x=37.87° (iii) x=40.87° (iv) x=39.87° (v) x=38.87°

7. Find the unknown angle in the following figure



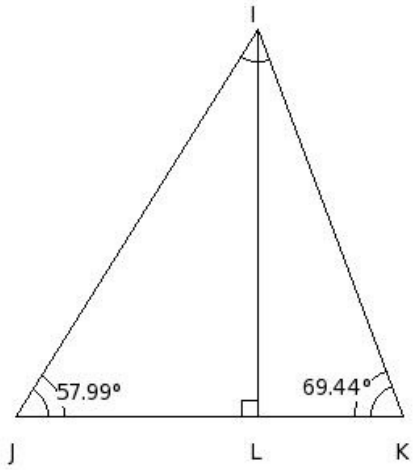
(i) x=43° (ii) x=47° (iii) x=45° (iv) x=46° (v) x=44°

8. In the given figure , if JG ⊥ HI and ∠GHJ = 39.58°, find ∠JGH



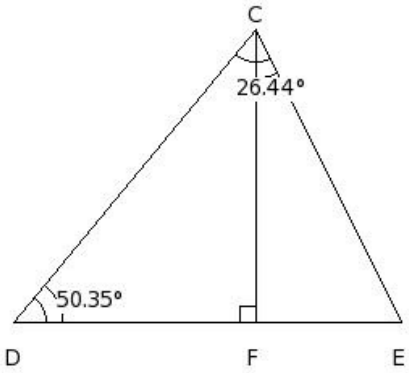
(i) 52.42° (ii) 50.42° (iii) 48.42° (iv) 49.42° (v) 51.42°

9. In the given figure , if LI ⊥ JK and ∠IJL = 57.99°, find ∠KIL



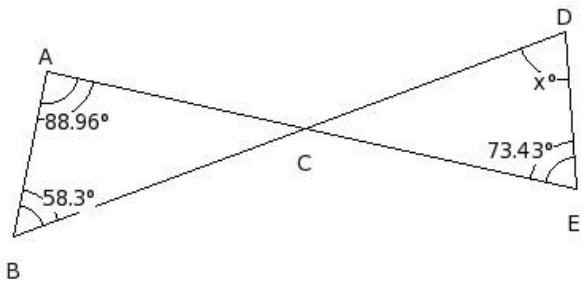
(i) 20.56° (ii) 21.56° (iii) 18.56° (iv) 19.56° (v) 22.56°

10. In the given figure , if FC ⊥ DE and ∠CDF = 50.35°, find ∠FEC



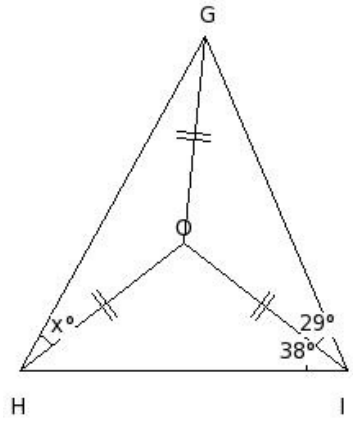
(i) 65.56° (ii) 61.56° (iii) 63.56° (iv) 64.56° (v) 62.56°

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



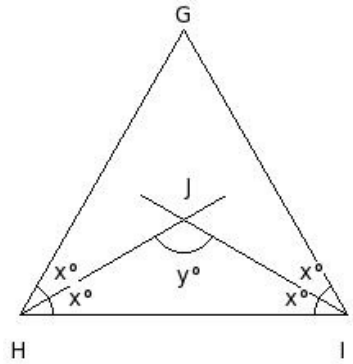
(i) x=74.83° (ii) x=71.83° (iii) x=72.83° (iv) x=73.83° (v) x=75.83°

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



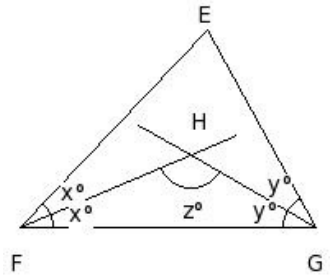
(i) x=23° (ii) x=21° (iii) x=22° (iv) x=24° (v) x=25°

13. In the given figure, △GHI is a triangle in which ∠G = ∠H = ∠I.
This bisectors of ∠H and ∠I intersect at J. Find ∠J =



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

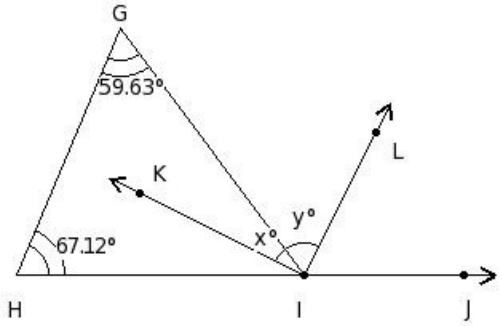
14. In the given figure, △EFG is a triangle in which ∠F = 46.47° and ∠G = 61.19°.
If 'z' is the angle between the bisector of ∠F and ∠G, then find z.



(i) 125.17° (ii) 124.17° (iii) 126.17° (iv) 128.17° (v) 127.17°

In the given figure, ∠G = 59.63° and ∠H = 67.12°.

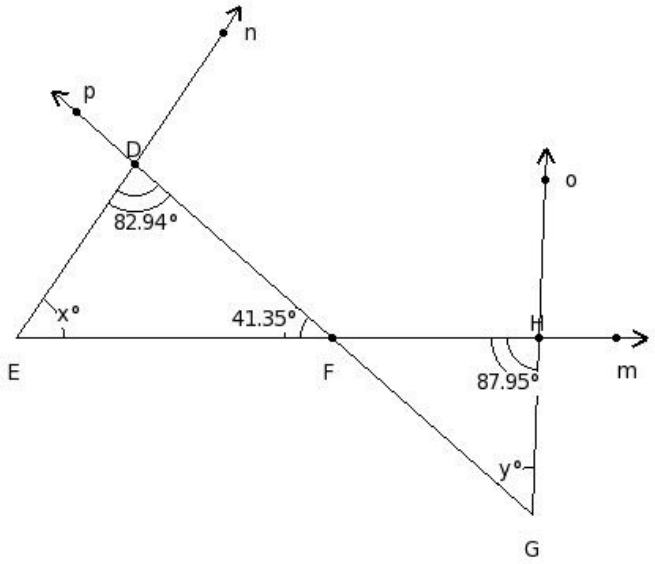
15. Side HI is produced to J, so that ∠HIG and ∠GIJ form a linear pair.
If $\overrightarrow{IK}$ and $\overrightarrow{IL}$ are the bisectors of ∠HIG and ∠GIJ, find x and y.



(i) x=28.62°,y=65.38° (ii) x=24.62°,y=61.38° (iii) x=26.62°,y=63.38° (iv) x=25.62°,y=62.38°

(v) x=27.62°,y=64.38°

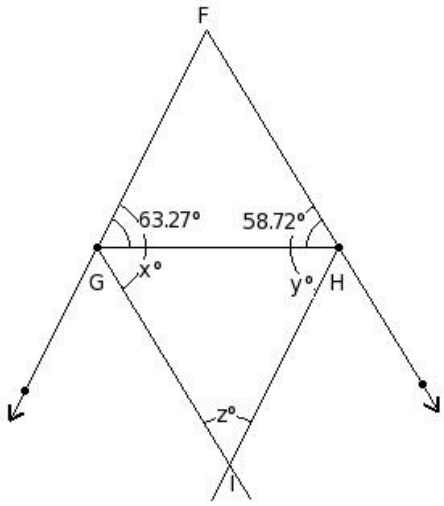
16. In the given figure, find the values of x and y



(i) x=56.71°,y=51.7° (ii) x=57.71°,y=52.7° (iii) x=53.71°,y=48.7° (iv) x=54.71°,y=49.7°

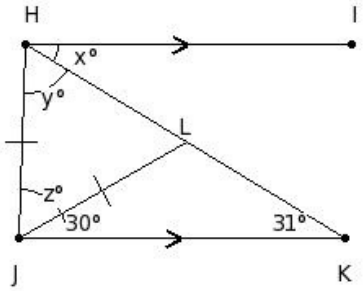
(v) x=55.71°,y=50.7°

17. In the given figure, △FGH in which ∠G = 63.27° and ∠H = 58.72°. FI and GH bisects each other. Find the value of z



(i) z=57.01° (ii) z=60.01° (iii) z=58.01° (iv) z=56.01° (v) z=59.01°

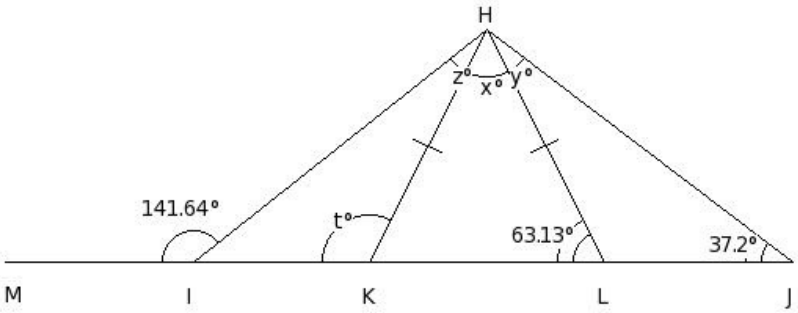
18. In the given figure, HI ∥ JK and HJ = JL. Find the values of x,y and z.



(i) x=31°,y=61°,z=58° (ii) x=33°,y=61°,z=56° (iii) x=29°,y=61°,z=60° (iv) x=31°,y=59°,z=60°

(v) x=29°,y=63°,z=58°

19. In the given figure, if HK = LH, find the values of x , y , z and t

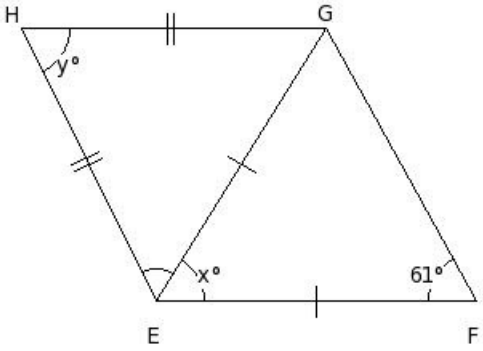


(i) x =53.74°, y =25.93°, z =25.77° , t =117.87° (ii) x =53.74°, y =23.93°, z =22.77° , t =116.87°

(iii) x =53.74°, y =25.93°, z =24.77° , t =116.87° (iv) x =53.74°, y =25.93°, z =23.77° , t =115.87°

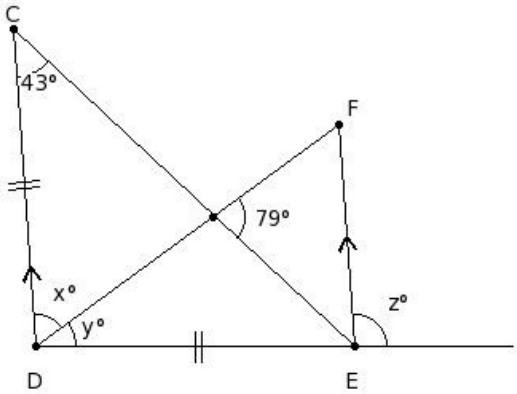
(v) x =53.74°, y =27.93°, z =26.77° , t =116.87°

20. In the following figure EF ∥ HG, find the values of x and y.



(i) x=60°,y=66° (ii) x=56°,y=62° (iii) x=57°,y=63° (iv) x=59°,y=65° (v) x=58°,y=64°

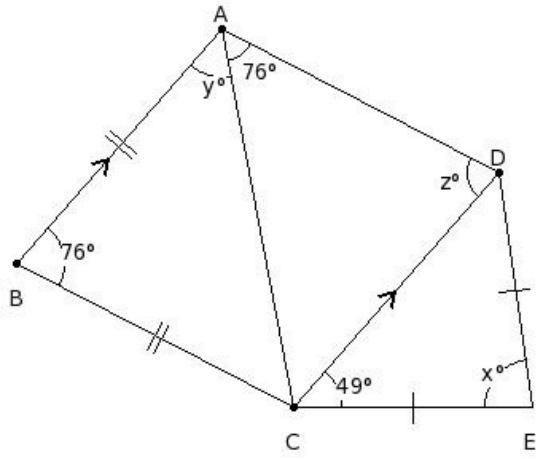
21. In the given figure, find the values of x ,y and z.



(i) x=58°,y=36°,z=94° (ii) x=56°,y=36°,z=96° (iii) x=56°,y=38°,z=94° (iv) x=58°,y=34°,z=96°

(v) x=60°,y=36°,z=92°

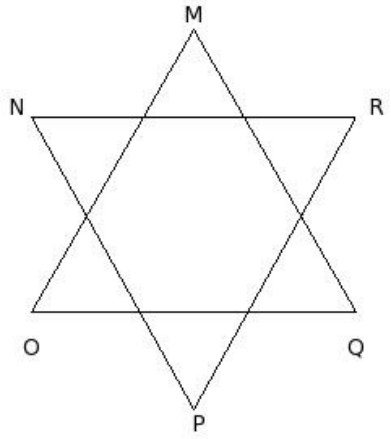
22. In the given figure, find the values of x ,y and z.



(i) x=84°,y=52°,z=74° (ii) x=80°,y=54°,z=76° (iii) x=82°,y=50°,z=78° (iv) x=82°,y=52°,z=76°

(v) x=80°,y=52°,z=78°

23. In the given two equilateral triangles, find ∠M + ∠O + ∠Q + ∠N + ∠P + ∠R .



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

Assignment Key

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