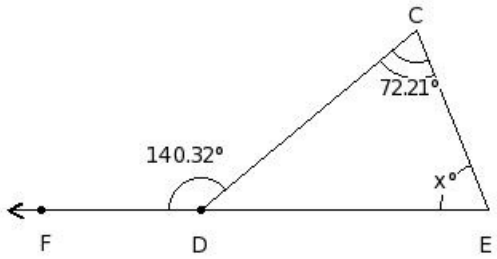
EduSahara™ Assignment

Name : Triangle Exterior Angle Properties using Diagrams

Chapter : Triangles and Its Properties

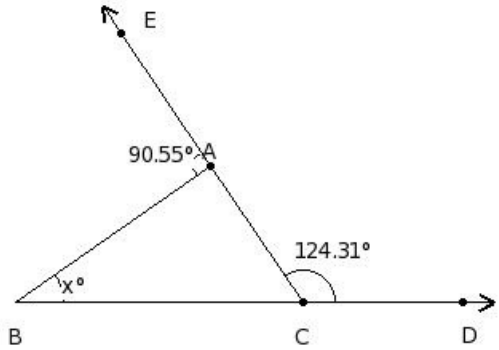
Grade : SSC Grade VII

1. Calculate the value of x in the following figure



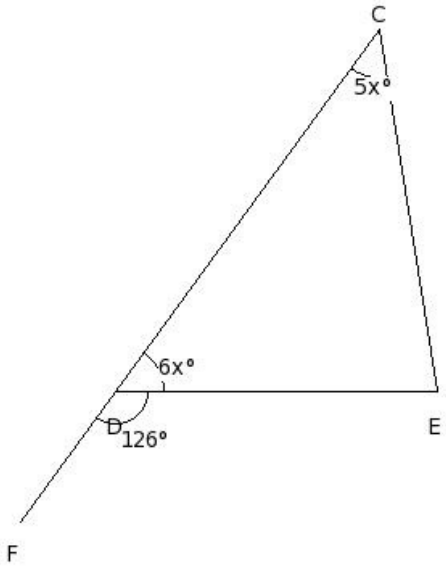
(i) x=70.11° (ii) x=66.11° (iii) x=68.11° (iv) x=67.11° (v) x=69.11°

2. Find the unknown marked angle in the following figure



(i) x=34.86° (ii) x=33.86° (iii) x=36.86° (iv) x=35.86° (v) x=32.86°

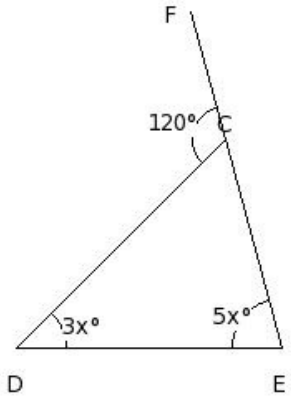
3. In the following figure, one side of a triangle has been produced. Find all the angles of the triangle



(i) C=45°,D=54°,E=81° (ii) C=45°,D=52°,E=83° (iii) C=47°,D=54°,E=79° (iv) C=43°,D=54°,E=83°

(v) C=43°,D=56°,E=81°

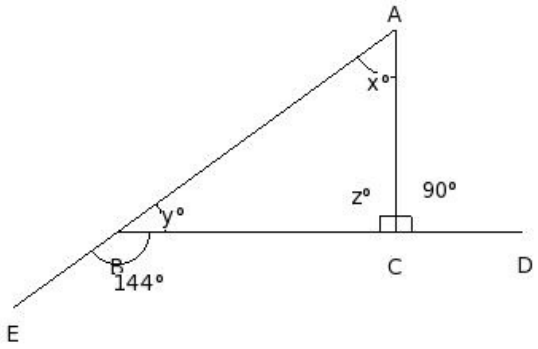
4. In the following figure, one side of a triangle has been produced. Find all the angles of the triangle.



(i) C=58°,D=47°,E=75° (ii) C=60°,D=45°,E=75° (iii) C=62°,D=45°,E=73° (iv) C=60°,D=43°,E=77°

(v) C=58°,D=45°,E=77°

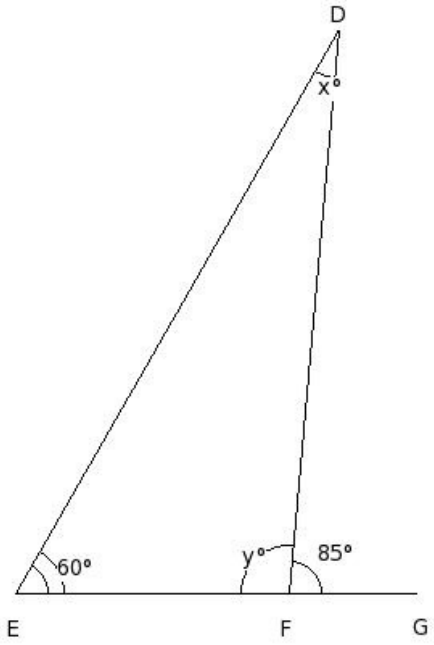
5. In the following figure, two sides of a triangle have been produced. Find all the angles of the triangle.



(i) x=54°,y=34°,z=92° (ii) x=56°,y=36°,z=88° (iii) x=54°,y=36°,z=90° (iv) x=52°,y=36°,z=92°

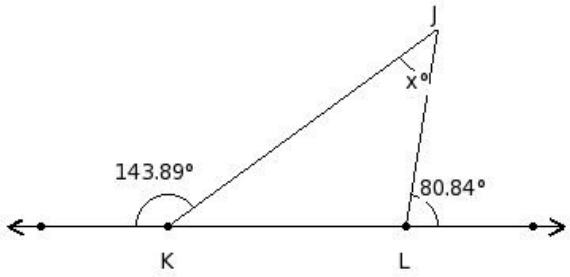
(v) x=52°,y=38°,z=90°

6. In the following figure, one side of a triangle has been produced. Find the values of x and y.



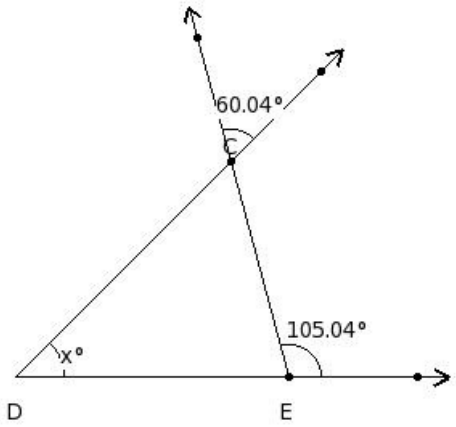
(i) x=23°,y=93° (ii) x=27°,y=97° (iii) x=26°,y=96° (iv) x=25°,y=95° (v) x=24°,y=94°

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



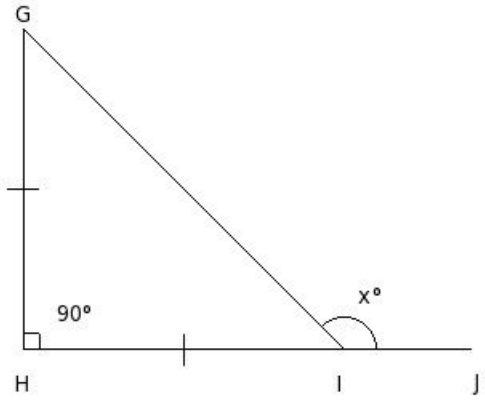
(i) x=43.73° (ii) x=44.73° (iii) x=46.73° (iv) x=42.73° (v) x=45.73°

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



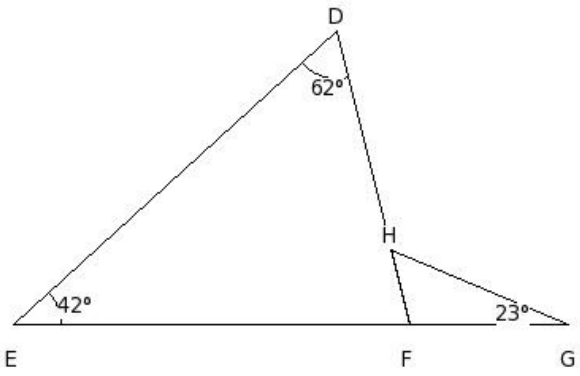
(i) x=43° (ii) x=46° (iii) x=44° (iv) x=45° (v) x=47°

9. Find the unknown angle in the following figure



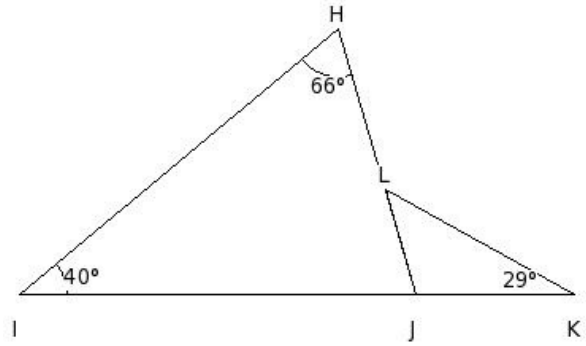
(i) x=134° (ii) x=137° (iii) x=136° (iv) x=135° (v) x=133°

10. In the given figure, find ∠EFD



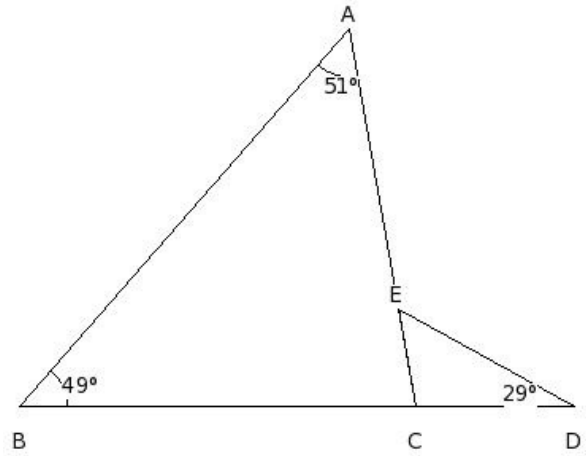
(i) 78° (ii) 76° (iii) 75° (iv) 74° (v) 77°

11. In the given figure, find ∠LJK



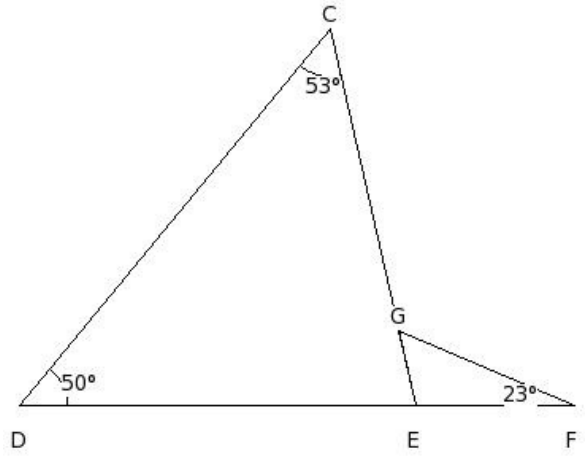
(i) 106° (ii) 105° (iii) 108° (iv) 104° (v) 107°

12. In the given figure, find ∠DEC



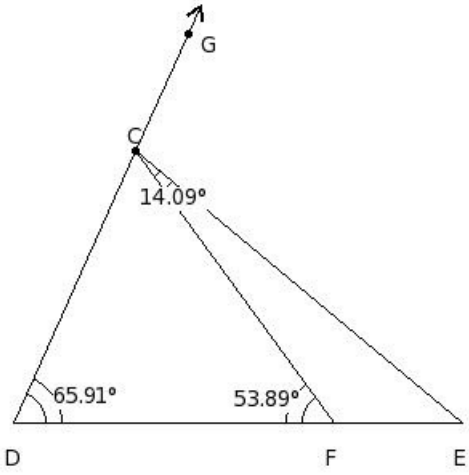
(i) 53° (ii) 49° (iii) 51° (iv) 50° (v) 52°

13. In the given figure, find ∠CGF



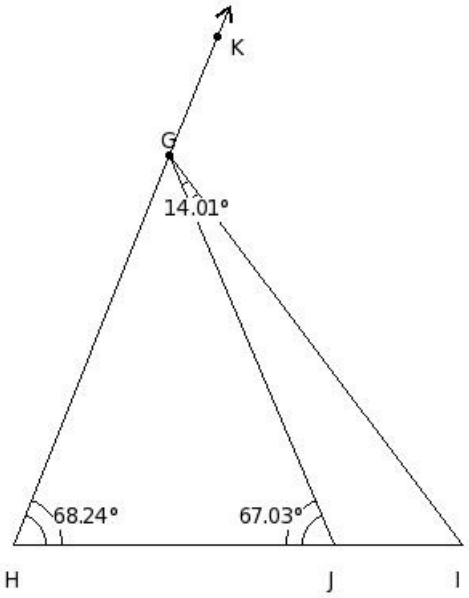
(i) 124° (ii) 125° (iii) 127° (iv) 126° (v) 128°

14. In below given figure, find ∠CFE



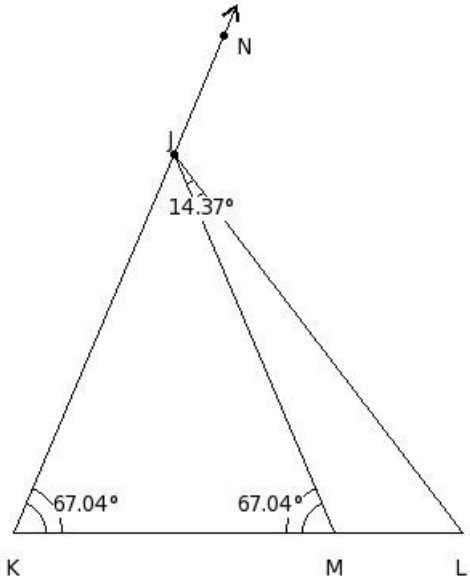
(i) 126.11° (ii) 127.11° (iii) 128.11° (iv) 125.11° (v) 124.11°

15. In below given figure, find ∠JGH



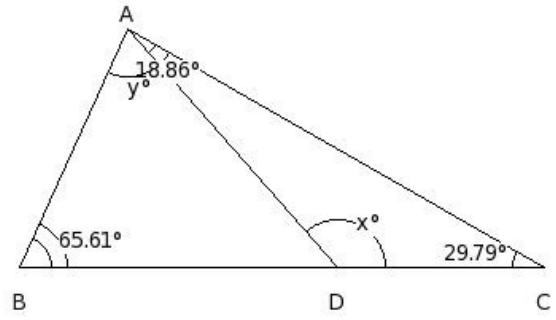
(i) 44.73° (ii) 46.73° (iii) 43.73° (iv) 42.73° (v) 45.73°

16. In below given figure, find ∠LJN



(i) 121.71° (ii) 120.71° (iii) 117.71° (iv) 118.71° (v) 119.71°

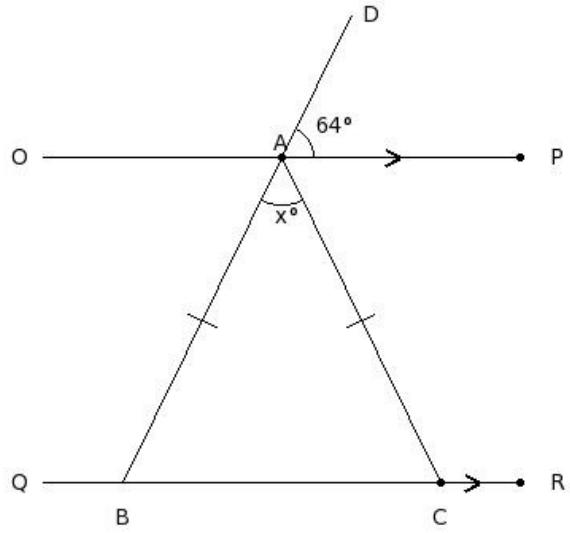
17. In the given figure, find the values of x and y.



(i) x=133.35°,y=67.74° (ii) x=132.35°,y=66.74° (iii) x=130.35°,y=64.74° (iv) x=131.35°,y=65.74°

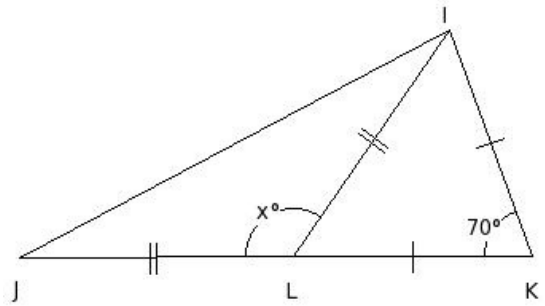
(v) x=129.35°,y=63.74°

18. In the given figure, OP ∥ QR, ∠DAP = 64° and AB = CA. Find the measure of x.



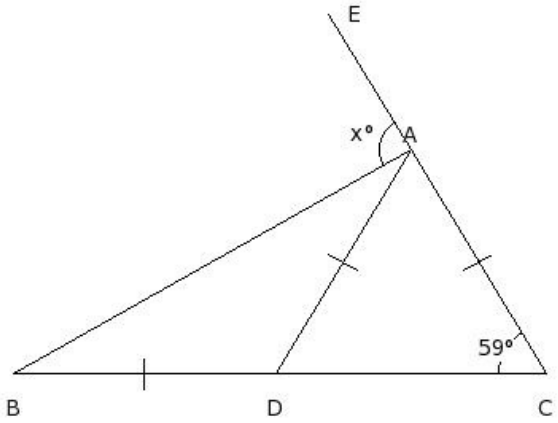
(i) x=50° (ii) x=53° (iii) x=51° (iv) x=52° (v) x=54°

19. In the given figure, find the value of x.



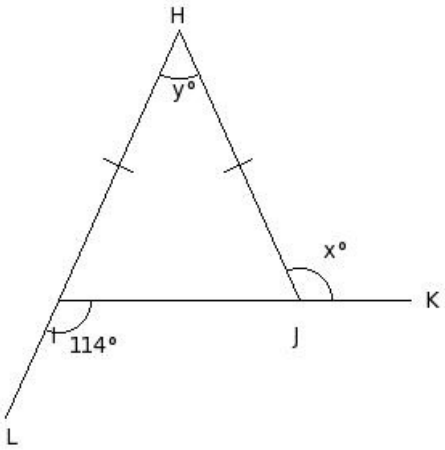
(i) x=125° (ii) x=123° (iii) x=124° (iv) x=126° (v) x=127°

20. In the given figure, if CA = AD = BD. Find the value of x.



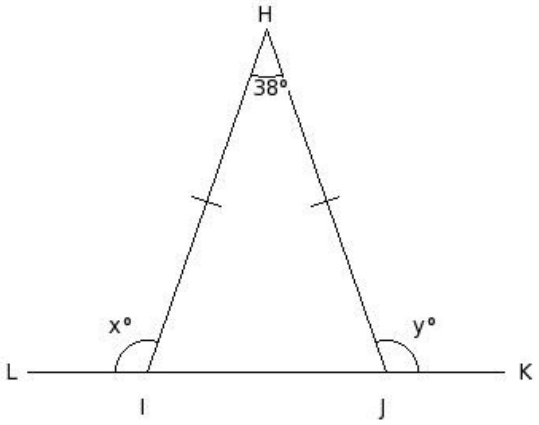
(i) x=88.5° (ii) x=87.5° (iii) x=90.5° (iv) x=86.5° (v) x=89.5°

21. Find the unknown marked angles in the following figure



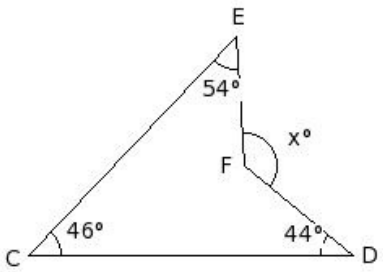
(i) x=116°,y=50° (ii) x=114°,y=48° (iii) x=113°,y=47° (iv) x=115°,y=49° (v) x=112°,y=46°

22. Find the unknown marked angles in the following figure



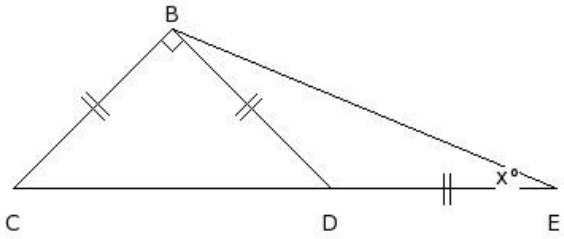
(i) x=111°,y=111° (ii) x=107°,y=107° (iii) x=109°,y=109° (iv) x=108°,y=108° (v) x=110°,y=110°

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



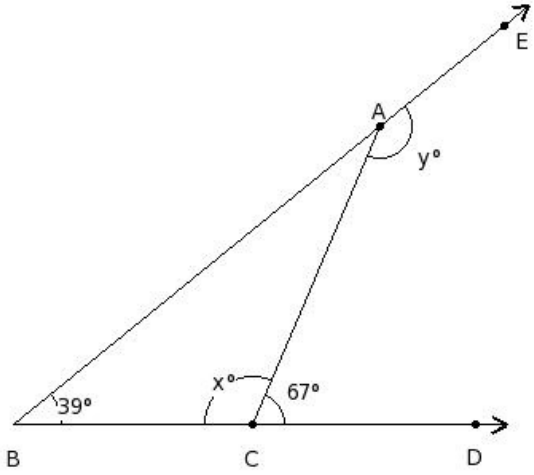
(i) x=144° (ii) x=145° (iii) x=146° (iv) x=143° (v) x=142°

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



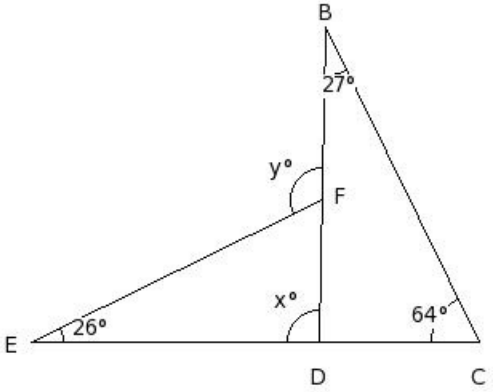
(i) x=21.5° (ii) x=24.5° (iii) x=23.5° (iv) x=22.5° (v) x=20.5°

25. Find the unknown marked angles in the following figure



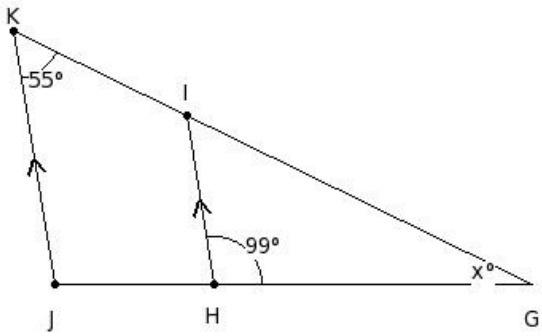
(i) x=112°,y=151° (ii) x=115°,y=154° (iii) x=111°,y=150° (iv) x=113°,y=152° (v) x=114°,y=153°

26. Find the unknown marked angles in the following figure



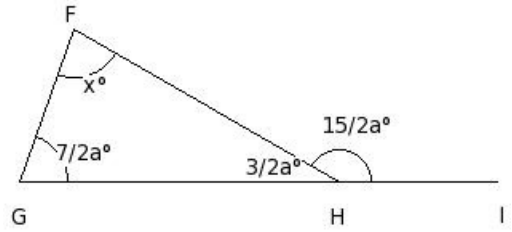
(i) x=93°,y=119° (ii) x=90°,y=116° (iii) x=91°,y=117° (iv) x=92°,y=118° (v) x=89°,y=115°

27. In the given figure, it is given that IH ∥ KJ , ∠IKJ = 55° and ∠IHG = 99°. Find the value of x.



(i) x=27° (ii) x=26° (iii) x=24° (iv) x=28° (v) x=25°

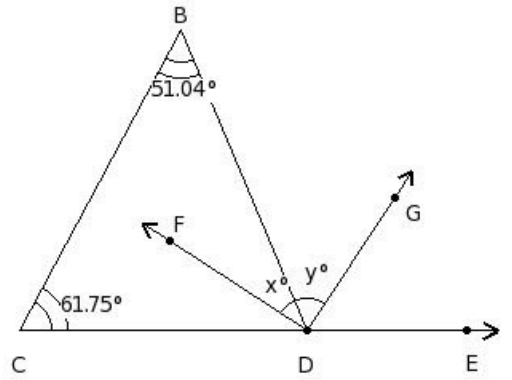
28. In the given figure, △FGH in which side GH has been produced to I. If ∠HFG = x° , ∠FGH = (7/2a)° , ∠GHF = (3/2a)° and ∠FHI = (15/2a)°, find the values of a and x.



(i) a=22°,x=82° (ii) a=21°,x=81° (iii) a=20°,x=80° (iv) a=18°,x=78° (v) a=19°,x=79°

In the given figure, ∠B = 51.04° and ∠C = 61.75°.

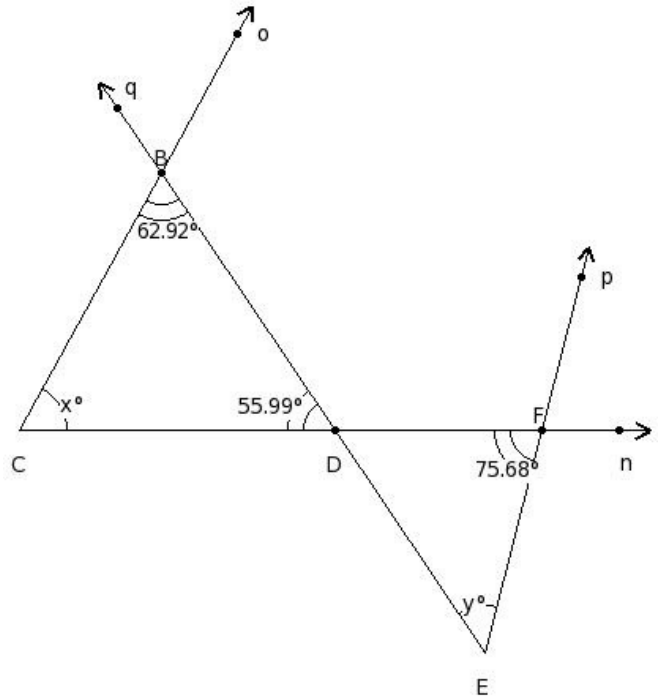
29. Side CD is produced to E, so that ∠CDB and ∠BDE form a linear pair.
If $\overrightarrow{DF}$ and $\overrightarrow{DG}$ are the bisectors of ∠CDB and ∠BDE, find x and y.



(i) x=33.6°,y=56.4° (ii) x=32.6°,y=55.4° (iii) x=31.6°,y=54.4° (iv) x=35.6°,y=58.4°

(v) x=34.6°,y=57.4°

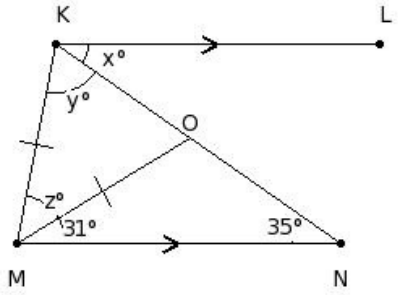
30. In the given figure, find the values of x and y



(i) x=62.09°,y=49.33° (ii) x=60.09°,y=47.33° (iii) x=63.09°,y=50.33° (iv) x=61.09°,y=48.33°

(v) x=59.09°,y=46.33°

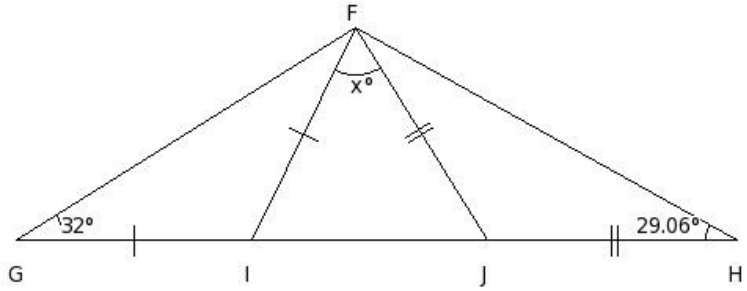
31. In the given figure, KL ∥ MN and KM = MO. Find the values of x,y and z.



(i) x=37°,y=66°,z=46° (ii) x=35°,y=66°,z=48° (iii) x=33°,y=66°,z=50° (iv) x=33°,y=68°,z=48°

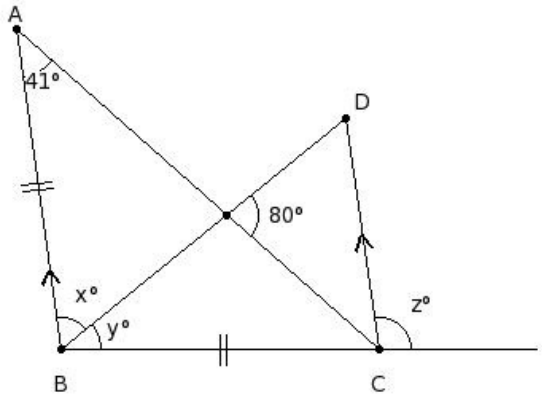
(v) x=35°,y=64°,z=50°

32. In the given figure, if IF = GI and FJ = JH , find the value of x.



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

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



(i) x=57°,y=41°,z=98° (ii) x=59°,y=37°,z=100° (iii) x=57°,y=39°,z=100° (iv) x=59°,y=39°,z=98°

(v) x=61°,y=39°,z=96°

Assignment Key

1) (iii)	2) (i)	3) (i)	4) (ii)	5) (iii)	6) (iv)
7) (ii)	8) (iv)	9) (iv)	10) (ii)	11) (i)	12) (iii)
13) (iv)	14) (i)	15) (i)	16) (v)	17) (iv)	18) (iv)
19) (i)	20) (i)	21) (ii)	22) (iii)	23) (i)	24) (iv)
25) (iv)	26) (iii)	27) (ii)	28) (iii)	29) (i)	30) (iv)
31) (ii)	32) (v)	33) (iv)			