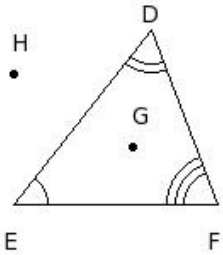


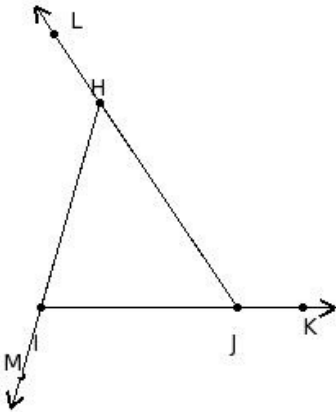


1. The vertices of the triangle are



- (i) E, F, G (ii) E, F, H (iii) D, E, G (iv) F, G, H (v) D, E, F

2. The exterior angles of the triangle are

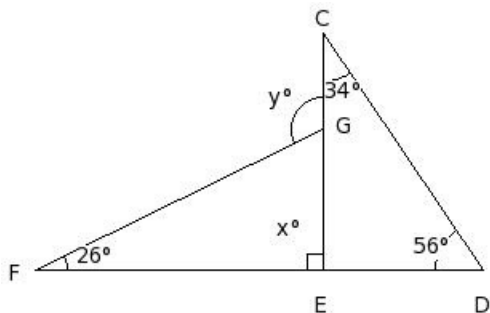


- (i)  $\angle KLI$ ,  $\angle LIJ$ ,  $\angle MJL$  (ii)  $\angle LKI$ ,  $\angle MIJ$ ,  $\angle NJK$  (iii)  $\angle JKH$ ,  $\angle KHI$ ,  $\angle LIK$  (iv)  $\angle MLJ$ ,  $\angle NJK$ ,  $\angle OKL$   
 (v)  $\angle KJH$ ,  $\angle LHI$ ,  $\angle MIJ$

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

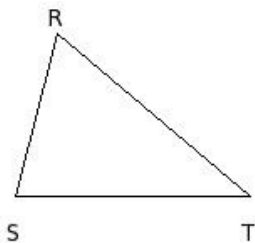
- (i)  $\angle K = 54.56^\circ$ ,  $\angle L = 62.72^\circ$ ,  $\angle M = 62.72^\circ$  (ii)  $\angle K = 65.16^\circ$ ,  $\angle L = 57.42^\circ$ ,  $\angle M = 57.42^\circ$   
 (iii)  $\angle K = 78.46^\circ$ ,  $\angle L = 44.42^\circ$ ,  $\angle M = 57.12^\circ$  (iv)  $\angle K = 60^\circ$ ,  $\angle L = 60^\circ$ ,  $\angle M = 60^\circ$   
 (v)  $\angle K = 45^\circ$ ,  $\angle L = 90^\circ$ ,  $\angle M = 45^\circ$

4. Find the unknown marked angles in the following figure



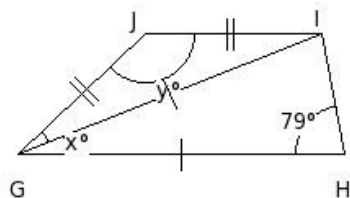
- (i)  $x=89^\circ, y=115^\circ$  (ii)  $x=90^\circ, y=116^\circ$  (iii)  $x=88^\circ, y=114^\circ$  (iv)  $x=92^\circ, y=118^\circ$  (v)  $x=91^\circ, y=117^\circ$

5. The side opposite to the vertex T



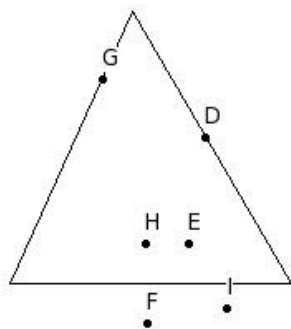
- (i)  $\overline{US}$  (ii)  $\overline{RV}$  (iii)  $\overline{TR}$  (iv)  $\overline{ST}$  (v)  $\overline{RS}$

6. In the following figure  $GH \parallel JI$ , find the values of x and y.



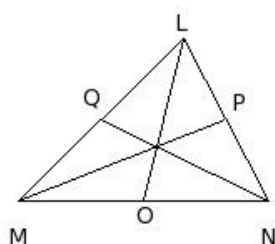
- (i)  $x=20^\circ, y=134^\circ$  (ii)  $x=23^\circ, y=137^\circ$  (iii)  $x=24^\circ, y=138^\circ$  (iv)  $x=22^\circ, y=136^\circ$  (v)  $x=21^\circ, y=135^\circ$

7. Identify the points that are outside the triangle



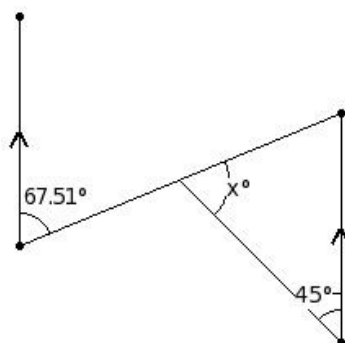
- (i)  $\{E, H\}$  (ii)  $\{D, G\}$  (iii)  $\{H, F\}$  (iv)  $\{I, G\}$  (v)  $\{F, I\}$

8. The median corresponding to the side  $\overline{LM}$



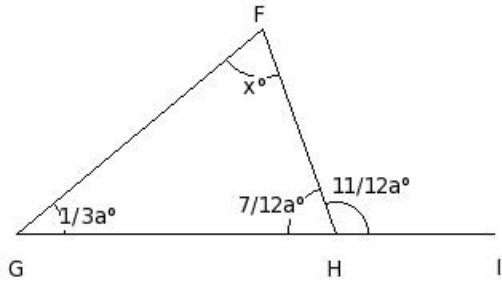
- (i)  $\overline{LO}$  (ii)  $\overline{LP}$  (iii)  $\overline{LM}$  (iv)  $\overline{MP}$  (v)  $\overline{NQ}$

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



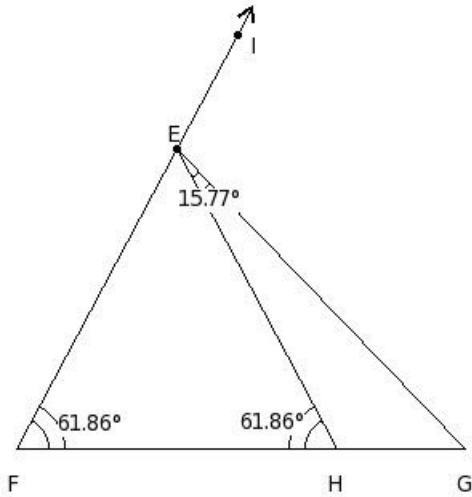
- (i)  $x=66.49^\circ$  (ii)  $x=68.49^\circ$  (iii)  $x=67.49^\circ$  (iv)  $x=69.49^\circ$  (v)  $x=65.49^\circ$

10. In the given figure,  $\triangle FGH$  in which side  $GH$  has been produced to  $I$ . If  $\angle HFG = x^\circ$ ,  $\angle FGH = (1/3a)^\circ$ ,  $\angle GHF = (7/12a)^\circ$  and  $\angle FHI = (11/12a)^\circ$ , find the values of  $a$  and  $x$ .



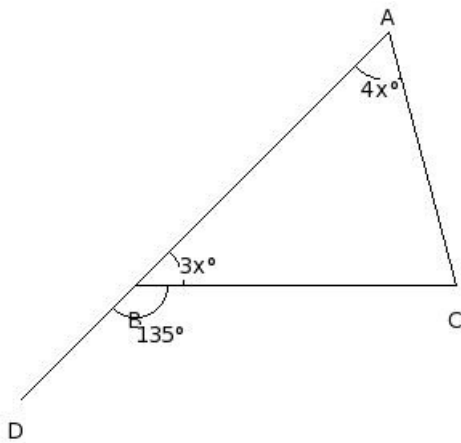
- (i)  $a=122^\circ, x=72^\circ$  (ii)  $a=118^\circ, x=68^\circ$  (iii)  $a=119^\circ, x=69^\circ$  (iv)  $a=121^\circ, x=71^\circ$  (v)  $a=120^\circ, x=70^\circ$

11. In below given figure, find  $\angle HEF$



- (i)  $57.28^\circ$  (ii)  $56.28^\circ$  (iii)  $58.28^\circ$  (iv)  $54.28^\circ$  (v)  $55.28^\circ$

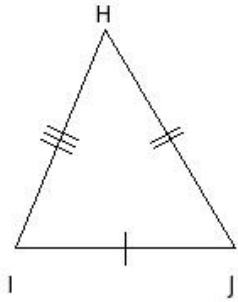
12. In the following figure, one side of a triangle has been produced. Find all the angles of the triangle



- (i)  $A=58^\circ, B=47^\circ, C=75^\circ$  (ii)  $A=60^\circ, B=43^\circ, C=77^\circ$  (iii)  $A=60^\circ, B=45^\circ, C=75^\circ$  (iv)  $A=62^\circ, B=45^\circ, C=73^\circ$   
 (v)  $A=58^\circ, B=45^\circ, C=77^\circ$

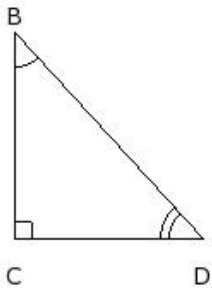
13. Consider the following figure. State which of the following statements are true

- a)  $\angle I = \angle J$
- b)  $\angle H \neq \angle I$
- c)  $\angle J \neq \angle H$
- d)  $\angle I \neq \angle J$
- e)  $\angle J = \angle H$
- f)  $\angle H = \angle I$



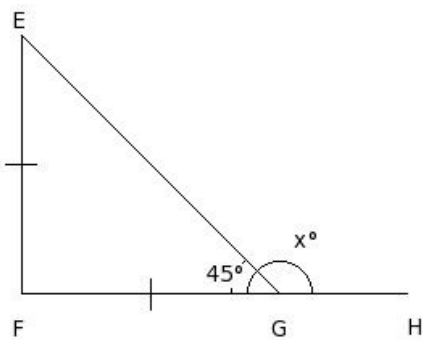
- (i) {e,b,c}
- (ii) {e,c}
- (iii) {f,a,d}
- (iv) {b,c,d}
- (v) {a,b}

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



- (i)  $\angle B = 83.47^\circ$ ,  $\angle C = 45.21^\circ$ ,  $\angle D = 51.32^\circ$
- (ii)  $\angle B = 102.21^\circ$ ,  $\angle C = 32.89^\circ$ ,  $\angle D = 44.9^\circ$
- (iii)  $\angle B = 44.42^\circ$ ,  $\angle C = 72.62^\circ$ ,  $\angle D = 62.96^\circ$
- (iv)  $\angle B = 42.51^\circ$ ,  $\angle C = 90^\circ$ ,  $\angle D = 47.49^\circ$
- (v)  $\angle B = 60^\circ$ ,  $\angle C = 60^\circ$ ,  $\angle D = 60^\circ$

15. Find the unknown angle in the following figure

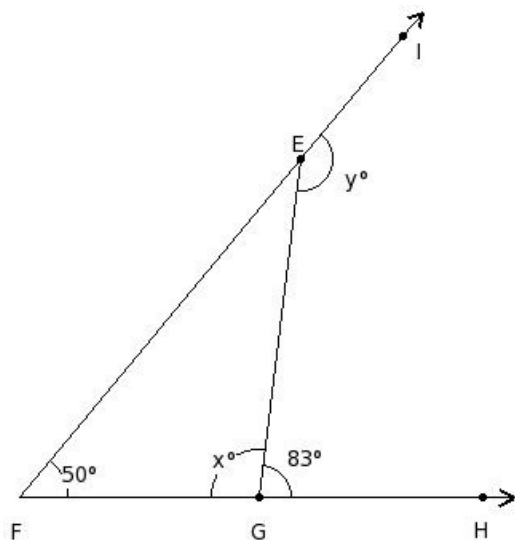


- (i)  $x=136^\circ$
- (ii)  $x=137^\circ$
- (iii)  $x=135^\circ$
- (iv)  $x=133^\circ$
- (v)  $x=134^\circ$

16. Which of the following are measures of an obtuse angled triangle ?

- (i)  $FG = 14$  cm ,  $GH = 21$  cm ,  $HF = 15$  cm
- (ii)  $FG = 10$  cm ,  $GH = 10$  cm ,  $HF = 14.14$  cm
- (iii)  $FG = 13$  cm ,  $GH = 14$  cm ,  $HF = 19.1$  cm
- (iv)  $FG = 11$  cm ,  $GH = 10$  cm ,  $HF = 13$  cm
- (v)  $FG = 11$  cm ,  $GH = 14$  cm ,  $HF = 14$  cm

17. Find the unknown marked angles in the following figure



- (i)  $x=98^\circ, y=148^\circ$  (ii)  $x=95^\circ, y=145^\circ$  (iii)  $x=97^\circ, y=147^\circ$  (iv)  $x=96^\circ, y=146^\circ$  (v)  $x=99^\circ, y=149^\circ$

18. In a right-angled triangle, the two acute angles are in the ratio 7 : 2. Find these angles.

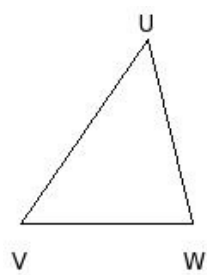
- (i)  $A=71^\circ, C=21^\circ$  (ii)  $A=70^\circ, C=20^\circ$  (iii)  $A=69^\circ, C=19^\circ$  (iv)  $A=72^\circ, C=22^\circ$  (v)  $A=68^\circ, C=18^\circ$

19. Which of the following may lie outside or on the triangle?

- a) orthocentre
- b) centroid
- c) excentre
- d) incentre
- e) circumcentre

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

20. The vertex opposite to the side  $\overline{WU}$

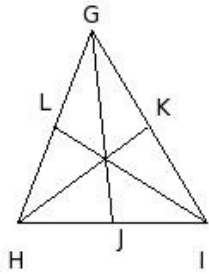


- (i) Y (ii) U (iii) V (iv)  $\overline{WX}$

21. Two angles of a triangle measure  $70^\circ$  and  $53^\circ$  respectively. Find the measure of the third angle of the triangle

- (i)  $56^\circ$  (ii)  $55^\circ$  (iii)  $57^\circ$  (iv)  $58^\circ$  (v)  $59^\circ$

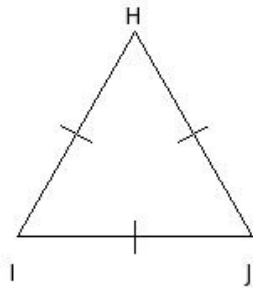
22. The median corresponding to the side  $\overline{IG}$



- (i)  $\overline{GK}$  (ii)  $\overline{IL}$  (iii)  $\overline{HK}$  (iv)  $\overline{GH}$  (v)  $\overline{GJ}$

23. Consider the following figure. State which of the following statements are true

- a)  $\angle J = \angle H$   
b)  $\angle H \neq \angle I$   
c)  $\angle I = \angle J$   
d)  $\angle J \neq \angle H$   
e)  $\angle H = \angle I$   
f)  $\angle I \neq \angle J$



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

24. Find the measure of each of the two equal angles of an isosceles right-angled triangle.

- (i)  $46^\circ$  (ii)  $47^\circ$  (iii)  $43^\circ$  (iv)  $44^\circ$  (v)  $45^\circ$

25. If all the three angles of a triangle are of the same measure, find the measure of each of the angles.

- (i)  $59^\circ$  (ii)  $58^\circ$  (iii)  $61^\circ$  (iv)  $60^\circ$  (v)  $62^\circ$

## Assignment Key

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