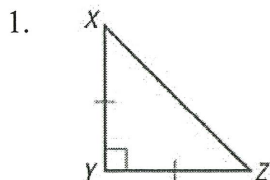
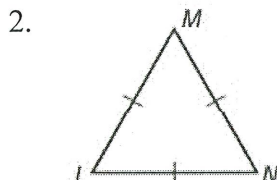


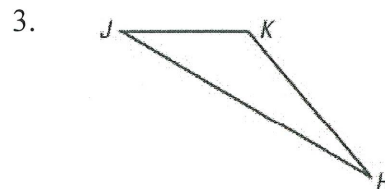
Classify each triangle by its sides and angles.



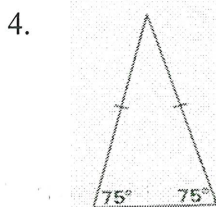
Isosceles; Right



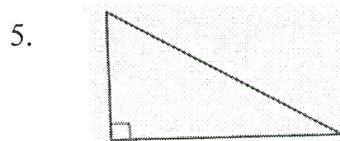
Equilateral; Acute



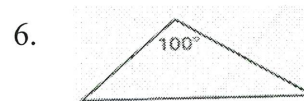
Scalene; Obtuse



Isosceles; Acute

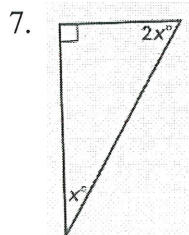


Scalene; Right

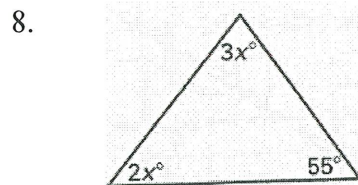


Scalene; Obtuse

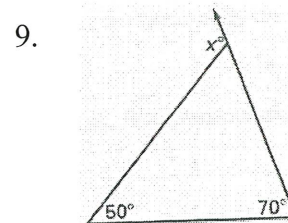
Find the value of x . Then classify the triangle by its angles. * Work should be shown *



$x = 30$; Right

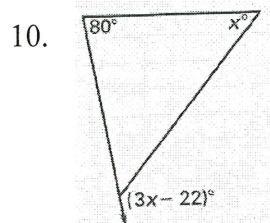


$x = 25$; Acute

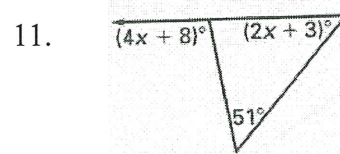


$x = 120$; Acute

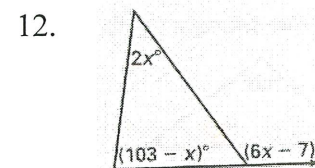
Find the measure of the exterior angle shown. * Work should be shown *



$x = 51$; Ext. $\angle = 131$



$x = 23$;
Ext. $\angle = 100$



$x = 22$
Ext $\angle = 125$

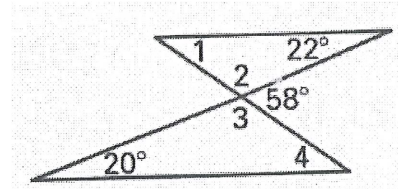
Find the measure of the numbered angle.

13. $m\angle 1 = 36^\circ$

14. $m\angle 2 = 122^\circ$

15. $m\angle 3 = 122^\circ$

16. $m\angle 4 = 38^\circ$



17. In $\triangle ABC$, $m\angle A = m\angle B + 30^\circ$ and $m\angle C = m\angle B + 60^\circ$. Find the measure of each angle.

Work should be shown

$m\angle A = 60^\circ$; $m\angle B = 30^\circ$; $m\angle C = 90^\circ$

18. In $\triangle EFG$, $m\angle F = 3(m\angle G)$ and $m\angle E = m\angle F - 30^\circ$. Find the measure of each angle.

Work should be shown

$m\angle E = 60^\circ$; $m\angle F = 90^\circ$; $m\angle G = 30^\circ$

19. Which of the following is not possible?

A. An acute scalene triangle

B. A triangle with two acute exterior angles

C. An obtuse isosceles triangle

D. An equilateral acute triangle.

20. You are bending a strip of metal into an isosceles triangle for a sculpture. The strip of metal is 20 inches long. The first bend is made 6 inches from one end. Describe **two** ways you could complete the triangle.

Option #1: Side #1 = 6in
Side #2 = 6in
Side #3 = 8in

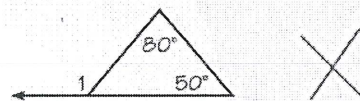
Option #2: Side #1 = 6in
Side #2 = 7in
Side #3 = 7in

Describe and **correct** the error.

21. All equilateral triangles are also isosceles. So, if $\triangle ABC$ is isosceles, then it is equilateral as well.



22. $m\angle 1 + 80^\circ + 50^\circ = 180^\circ$



Complete the sentence with *always*, *sometimes* or *never*.

23. An isosceles triangle is Sometimes a right triangle.

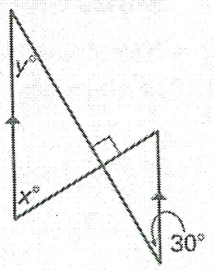
24. An obtuse triangle is never a right triangle.

25. A right triangle is never an equilateral triangle.

26. A right triangle is Sometimes an isosceles triangle.

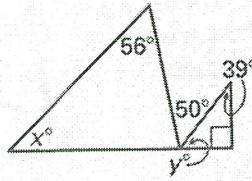
Find the values of x and y . **★ Show work ★**

27.



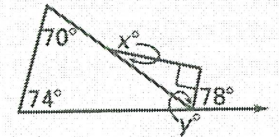
$$\underline{x = 60^\circ}; \quad \underline{y = 30^\circ}$$

28.



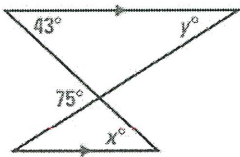
$$\underline{x = 45^\circ}; \quad \underline{y = 51^\circ}$$

29.



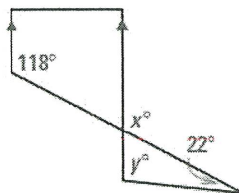
$$\underline{x = 24^\circ}; \quad \underline{y = 66^\circ}$$

30.



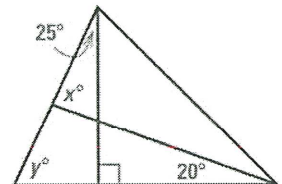
$$\underline{x = 43^\circ}; \quad \underline{y = 32^\circ}$$

31.



$$\underline{x = 118^\circ}; \quad \underline{y = 96^\circ}$$

32.



$$\underline{x = 85^\circ}; \quad \underline{y = 65^\circ}$$

