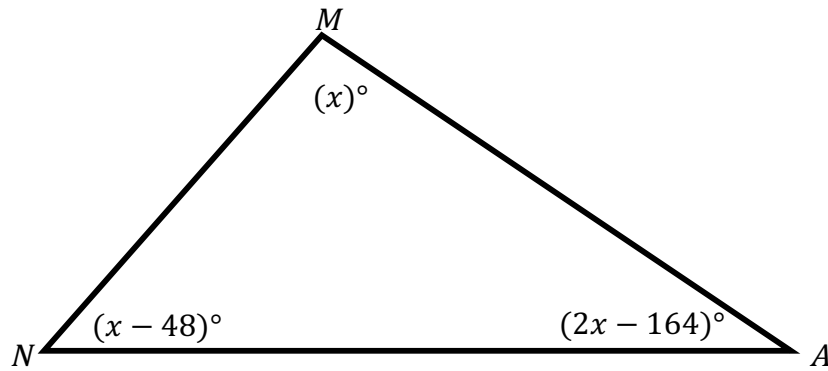


Name \_\_\_\_\_

Date \_\_\_\_\_

**Triangles – Part 1**  
**Introduction to Triangles – Part 2**  
**Independent Practice**

1. Consider the figure below.



Determine the measure of each interior angle of  $\triangle MAN$  and classify the triangle.

$m\angle A =$

$m\angle M =$

$m\angle N =$

$\triangle MAN$  is a(n) \_\_\_\_\_ triangle.

2. Triangle  $CAT$  has vertices at  $C(-6, 0)$ ,  $A(4, -2)$ , and  $T(5, 3)$ .

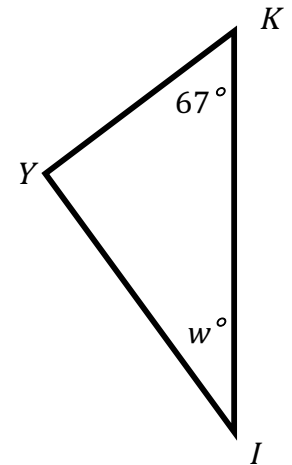
What type of triangle is  $CAT$ ?

- A Obtuse
- B Isosceles
- C Equilateral
- D Right



3. *Garden Plus LLC*. Is fencing a triangular garden for Mr. Gold (pictured on the right).

Part A: Determine the expression for the measure of angle  $Y$ .



Part B: If  $m\angle I = 33$  and  $m\angle Y = 14d - 19$ , then determine the value of  $d$ .

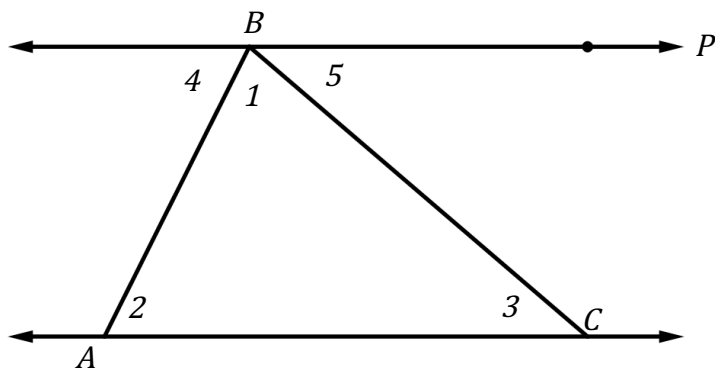
4. Triangle  $OMG$  has vertices at  $O(4, -2)$ ,  $M(5, 3)$ , and  $G(-6, 0)$ . If point  $G$  is transformed under

the translation of  $(x, y) \rightarrow (x + 3, y + 2)$ , then  $\triangle OMG'$  is

- equilateral.
- isosceles.
- scalene.



5. Consider the following figure.



**Given:**  $\triangle ABC$ , and  $\overline{BP}$  is parallel to  $\overline{AC}$ .

**Prove:**  $m\angle 1 + m\angle 2 + m\angle 3 = 180^\circ$

Statements	Reasons
1. $ABC$ is a triangle.	1.
2. $\overline{BP} \parallel \overline{AC}$	2.
3. $m\angle 1 + m\angle 5 = m\angle PBA$	3.
4. $m\angle PBA + m\angle 4 = 180$	4.
5. $m\angle 1 + m\angle 5 + m\angle 4 = 180^\circ$	5.
6. $\angle 2 \cong \angle 4; \angle 3 \cong \angle 5$	6.
7. $m\angle 2 = m\angle 4; m\angle 3 = m\angle 5$	7.
8. $m\angle 1 + m\angle 2 + m\angle 3 = 180^\circ$	8.

