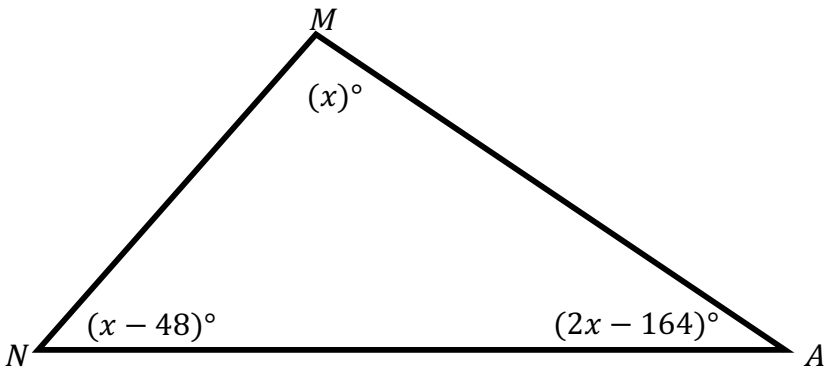
Name _____ Date_____

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.

$m\angle A =$ ☐

$m\angle M =$ ☐

$m\angle N =$ ☐

ΔMAN is a(n) _____ triangle.

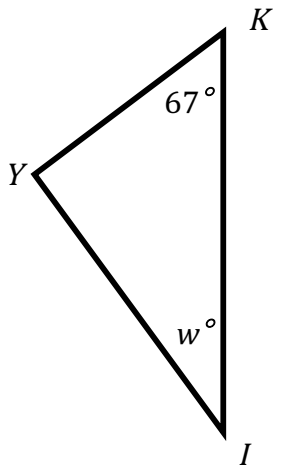
2. Triangle CAT has vertices at $C(-6, 0)$, $A(4, -2)$, and $T(5, 3)$.

What type of triangle is CAT?

Ⓐ Obtuse
Ⓑ Isosceles
Ⓒ Equilateral
Ⓓ 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.

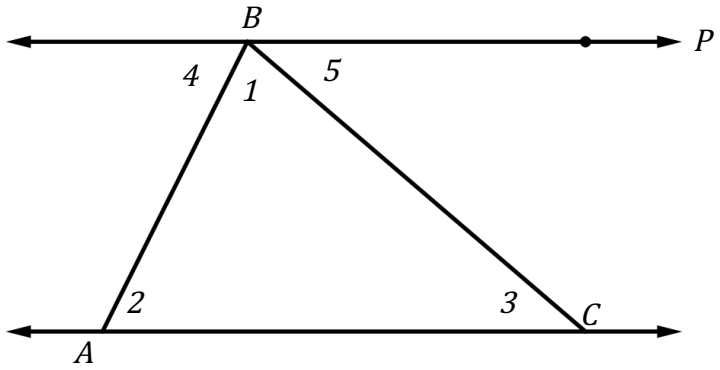


Part B: If $m\angle I = 33$ and $m\angle Y = 14d - 19$, then determine the value of d.

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

- O equilateral.
- O isosceles.
- O scalene.

5. Consider the following figure.



Given: ΔABC, and $\overline{BP}$ is parallel to $\overline{AC}$.
Prove: $m\angle 1 + m\angle 2 + m\angle 3 = 180°$

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. $m\angle 1 + m\angle 5 + m\angle 4 = 180°$	**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. $m\angle 1 + m\angle 2 + m\angle 3 = 180°$	**8.**