Topic: 3.1 Classifying and Drawing Triangles

1. What is a triangle? How many sides does a triangle have?
2. Based on the name, what do you think an equilateral triangle is? Can you draw one?
3. What do you think an isosceles triangle is? Can you draw one?
4. What do you think a scalene triangle is? Can you draw one?
5. Can you find any similarities between these triangles? Any differences?
6. Using your understanding, try to formally define equilateral, isosceles, and scalene triangles.
7. What are right angles, acute angles, and obtuse angles? Can you draw one of each?
8. Based on your understanding of these types of angles, can you guess what an obtuse, acute, and right triangle is? Draw one of each.
9. A triangle on a coordinate plane is made up of points $A(0, 2)$, $B(5, 1)$, and $C(-3, -5)$.
   - Find the lengths of $\bar{AB}$, $\bar{BC}$, and $\bar{AC}$.
   - Based on the side lengths, is the triangle equilateral, isosceles, or scalene?
   - Looking at the triangle, does it appear to be acute, right, or obtuse? Can you prove this? (hint: slope)