**Geometry Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Guided Notes – Trigonometric Ratios Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Triangle Sides (based on θ)**



  **Opposite leg**

 **\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_hypotenuse\_**





 **\_\_adjacent leg\_**

Which side is the hypotenuse? \_\_\_\_\_\_\_\_\_ Which side is the hypotenuse? \_\_\_\_\_\_\_\_\_

Which leg is opposite θ? \_\_\_\_\_\_\_\_\_\_\_\_ Which leg is opposite θ? \_\_\_\_\_\_\_\_\_\_\_\_

Which leg is adjacent to θ?\_\_\_\_\_\_\_\_\_\_ Which leg is adjacent to θ?\_\_\_\_\_\_\_\_\_\_

 **What are the Trigonometric Ratios?**

|  |  |
| --- | --- |
| **Sine** |  |
| **Cosine** |  |
| **Tangent** |  |
|  |

**SohCahToa**

SOH **Sine** equals \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ over \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 CAH **Cosine**  equals \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ over \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 TOA **Tangent**\_ equals \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ over \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How do we use these ratios?**

 sin θ = \_\_\_\_\_\_ = \_\_\_\_\_\_

 cos θ = \_\_\_\_\_\_ = \_\_\_\_\_\_

 tan θ = \_\_\_\_\_\_ = \_\_\_\_\_\_

**Find the missing side and evaluate each for sin θ, cos θ, and tan θ.**



 ** **

**How would you solve the following problem?**

Suppose J and K are complementary angles in a right triangle. The value of tan J = .

What is the value of sin J?

1. Draw and label a triangle for the problem.

2. Use the given trig ratio to label the lengths of two sides. Then use the Pythagorean Theorem to find the third side.

3. Using the measures of the sides of the triangle, find sin J.