**Name: Period: Date:**

**RIGHT TRIANGLE DEFINITION OF TRIGONOMETRIC FUNCTIONS**

**Guided Notes**

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| Warm-Up:Find the missing side of the triangle. Answer: √180 or 6√5How did you solve this problem? Used Pythagorean Theorem  |
| Triangle Basics* Hypotenuse: the longest side of a right triangle; is opposite the right angle.
* Opposite Leg: the side of the right triangle that is opposite the given angle.
* Adjacent Leg: the side of the right triangle that is next to the given angle.
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| Label the correct sides of the triangle |
| Show formula for SOH CAH TOASOH: sin θ = opposite/hypotenuse CAH: cos θ = adjacent/hypotenuseTOA: tan θ = opposite/adjacent |
| How is this problem different from the warm-up problem?Partner Share: How would you solve this problem? |
| What are YOUR ideas? |
| Let’s Try It! |
| Show Your Work! |
| The six trigonometric functions of θ are defined as follows. Sine (θ) = sin θ = opp/hyp Cosecant (θ) = csc θ = hyp/oppCosine (θ) = cos θ = adj/hyp Secant (θ) = sec θ = hyp/adjTangent (θ) = tan θ = opp/adj Cotangent (θ) = cot θ = adj/opp |
| Example One)Evaluate the Six Trigonometric Functions of the angle C shown in the right triangle.sin C = opp/hyp = 6/10 = 3/5 csc C = hyp/opp = 5/3cos C = adj/hyp = 8/10 = 4/5 sec C = hyp/adj = 5/4tan C = opp/adj = 6/8 = 3/4 cot C = adj/opp = 4/3  |