Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_ Date: \_\_\_\_\_\_\_

**7.3E Pythagorean Theorem Word Problems\_Classwork**

Additional Notes to Help You Be Successful:

* When you round an answer, you use $≈$ to say “approximately equal to”
* When you round to the nearest tenth, look at the hundredths digit: if it’s 5 or greater, round up the digit in the tenths place, if it’s 4 or less, tenths’ place digit stays the same.
* There are two abbreviations for feet: ft. and ‘
* There are two abbreviations for inches: in. and “
* An isosceles triangle has 2 congruent sides.

FORMULAS:

Area (rectangle) = b ∙ h Area (triangle) = $\frac{1}{2}bh$ Area (square) = s2 Perimeter (square) = 4s

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Solve each problem. Draw a picture and use the Pythagorean Theorem to solve. Be sure to label all answers and, when necessary, round to the nearest tenth.

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| 1. The area of a square is 100 square centimeters. First, find the length of a side. Then, find the length of the diagonal.
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| 1. In a computer catalog, a computer monitor is listed as being 19 inches. The distance is the diagonal distance across the screen. If the screen measures 10 inches in height, what is the actual width of the screen to the nearest inch?
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| 1. The diagonal of a rectangle is 30 cm. The length is 24cm. What is the area of the rectangle?
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HW: 7.3D Homework (handout) – check your answers and show your work

EXAMPLE 1

The diagonal of a rectangle is 20 in. The width is 16 in. What is the area of the rectangle?

EXAMPLE 2

Two sides of a right triangle are 8 cm and 15 cm.

1. Find the area of the triangle if the legs are 8cm and 15cm.
2. Find the area of the triangle if 8 and 15 are a leg and a hypotenuse of the triangle.