## Unit 7 Lesson 1 HW Pythagorean Theorem \& Intro to Trigonometry

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## I. Pythagorean Theorem

1. Find the missing side length

2. Find the missing side length in the right triangle $A B C$.

Let $c$ represent the length of the hypotenuse. $a=7$ inches $\quad b=24$ inches
3. Ashley jogged 3.4 miles east, then 5.7 miles south. How far is Ashley from her starting point?
4. A 31 foot support wire is attached from the top of a 25 foot telephone pole to a point on the ground. How far from the base of the pole does the wire meet the ground?

## II. Labeling Sides - Using the reference angle provided, label each side as $\mathbf{O}$ (opposite), $\mathbf{A}$ (adjacent), or $\mathbf{H}$ (hypotenuse).

1. Reference Angle: A

B

2. Reference Angle: A

3. Reference Angle: B
B

4. Reference Angle: B


## III. Write the Trig Ratios in simplest form.

5. 


$\qquad$ $\operatorname{Sin} T=$ $\qquad$
$\operatorname{Cos} R=$ $\qquad$
$\operatorname{Cos} T=$ $\qquad$
6. Find the missing trig ratios for angle A and B if $\sin A=\frac{20}{29}$


Tan $R=$ $\qquad$ Tan $T=$ $\qquad$

