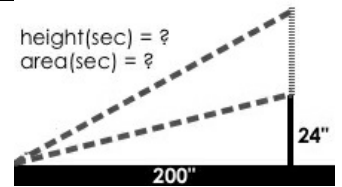


# Top Down / Bottom Up

A retractable flag pole starts out 24 inches tall, and grows taller at a rate of 0.6in/sec. An elastic is anchored 200 inches from the base and attached to the top of the pole, forming a right triangle. Using a top-down or bottom-up strategy, define functions that compute the *height* of the pole and the *area* of the triangle after a given number of seconds.



**Directions :** Define your first function ( *height* or *area* ) here.

## Contract and Purpose Statement

Every contract has three parts...

;  
\_\_\_\_\_ : \_\_\_\_\_ -> \_\_\_\_\_  
*function name* *domain* *range*

;  
\_\_\_\_\_  
*what does the function do?*

## Examples

Write some examples, then circle and label what changes...

( EXAMPLE ( \_\_\_\_\_ ) \_\_\_\_\_ )  
*function name* *input(s)* *what the function produces*

( EXAMPLE ( \_\_\_\_\_ ) \_\_\_\_\_ )  
*function name* *input(s)* *what the function produces*

## Definition

Write the definition, giving variable names to all your input values...

( define ( \_\_\_\_\_ ) \_\_\_\_\_ )  
*function name* *variable(s)*

\_\_\_\_\_  
*what the function does with those variable(s)*

**Directions :** Define your second function ( *height* or *area* ) here.

## Contract and Purpose Statement

Every contract has three parts...

;  
\_\_\_\_\_ : \_\_\_\_\_ -> \_\_\_\_\_  
*function name* *domain* *range*

;  
\_\_\_\_\_  
*what does the function do?*

## Examples

Write some examples, then circle and label what changes...

( EXAMPLE ( \_\_\_\_\_ ) \_\_\_\_\_ )  
*function name* *input(s)* *what the function produces*

( EXAMPLE ( \_\_\_\_\_ ) \_\_\_\_\_ )  
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## Definition

Write the definition, giving variable names to all your input values...

( define ( \_\_\_\_\_ ) \_\_\_\_\_ )  
*function name* *variable(s)*

\_\_\_\_\_  
*what the function does with those variable(s)*