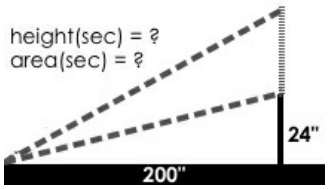
Top Down / Bottom Up

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 (_____ _____)

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what the function does with those variable(s)