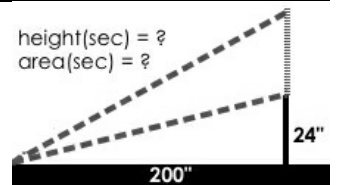


Top Down / Bottom Up

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...

area:: Number -> Number
function name domain range

Consumes seconds & produces the area of the triangle with a base of 200 and changing height

what does the function do?

Examples

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

examples :

area (5) is 1/2 * (200 * height(5))
function name input(s) what the function produces

area (6) is 1/2 * (200 * height(6))
function name input(s) what the function produces

end

Definition

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

fun area(sec):
function name variable(s)

1/2 * (200 * height(sec))
what the function does with those variable(s)

end

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

Contract and Purpose Statement

Every contract has three parts...

height:: Number -> Number
function name domain range

Consumes the # of seconds and produces the height, according to $h = 0.6s + 24$

what does the function do?

Examples

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

examples :

height (1) is (0.6 * 1) + 24
function name input(s) what the function produces

height (2) is (0.6 * 2) + 24
function name input(s) what the function produces

end

Definition

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

fun height(sec):
function name variable(s)

(0.6 * sec) + 10
what the function does with those variable(s)

end