

# What's Wrong with these Recipes? 2

**Directions:** Write a function that returns the area of a circle given its diameter.

## Contract and Purpose Statement

Every contract has three parts...

# circle-area:: Number -> Number  
function name domain range

# Given the diameter, multiply pi by radius squared to get the area  
what does the function do?

## Examples

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

**examples:**

circle-area ( 10 ) is num-sqr(10 / 2) \* pi  
function name input(s) what the function produces

circle-area ( 50 ) is num-sqr(50 / 2) \* pi  
function name input(s) what the function produces

end

## Definition

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

**fun** circle-area( diameter ):  
function name variable(s)

sqr(diameter) \* pi  
what the function does with those variable(s)

end

**Directions:** You have 100 square feet of carpet to put down in your room. Write a function that takes in the length and width of your room and returns true if you have enough carpet and false if you don't.

## Contract and Purpose Statement

Every contract has three parts...

# have-enough-carpet:: Number, Number -> Number  
function name domain range

# Given length and width of a room, is the area <= 100 sq feet?  
what does the function do?

## Examples

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

**examples:**

have-enough-carpet ( (10 15) )  
function name input(s)

is (10 \* 15) <= 100  
what the function produces

have-enough-carpet ( (9 10) )  
function name input(s)

is (9 \* 10) < 100  
what the function produces

end

## Definition

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

**fun** have-enough-carpet( length, width ):  
function name variable(s)

(length \* width) < 100  
what the function does with those variable(s)

end