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

  have-enough-carpet ((9 10)   )

     function name   *what the function produces*   *input(s)*

end is (9 * 10) < 100

               what the function produces

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