

Check for Mistakes in this Word Problem: circle-area

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

Contract and Purpose Statement

Every contract has three parts...

<code>;</code>	<code>circle-area</code>	<code>:</code>	<code>number</code>	<code>→</code>	<code>number</code>
	<i>function name</i>		<i>domain</i>		<i>range</i>
<code>;</code>	<code>Takes the diameter of a circle and calculates the area by multiplying</code>				
	<i>what does the function do?</i>				

Examples

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

<code>(EXAMPLE(</code>	<code>circle-area</code>	<code>10</code>	<code>)</code>	<code>(*</code>	<code>(sqr (/ 10 2))</code>	<code>pi)</code>	<code>)</code>
	<i>function name</i>	<i>input(s)</i>			<i>what the function produces</i>		
<code>(EXAMPLE(</code>	<code>circle-area</code>	<code>50</code>	<code>)</code>	<code>(*</code>	<code>(sqr (/ 50 2))</code>	<code>pi)</code>	<code>)</code>
	<i>function name</i>	<i>input(s)</i>			<i>what the function produces</i>		

Definition

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

<code>(define(</code>	<code>area</code>	<code>diameter</code>	<code>)</code>
	<i>function name</i>	<i>variables</i>	
	<code>(* (sqr diameter) pi)</code>		
	<i>what the function does with those variables</i>		