

Word Problem: collide?

Directions: Write a function `collide?`, which takes FOUR inputs:

- `px`: The x-coordinate of the player
- `py`: The y-coordinate of the player
- `cx`: the x-coordinate of another game character
- `cy`: the y-coordinate of another game character

Are the coordinates of the player within 50 pixels of the coordinates of the other character?

Contract and Purpose Statement

Every contract has three parts...

<code>;</code>	<code>collide?</code>	<code>:</code>	<code>number number number number</code>	<code>→</code>	<code>boolean</code>
	<hr/>		<hr/>		<hr/>
	<i>function name</i>		<i>domain</i>		<i>range</i>

<code>;</code>	<code>Is the Player (px, py) within 50 pixels of another Character (cx, cy)?</code>
	<hr/>
	<i>what does the function do?</i>

Examples

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

<code>(EXAMPLE(</code>	<code>collide?</code>	<code>25 75 30 270)</code>
	<hr/>	<hr/>
	<i>function name</i>	<i>input(s)</i>

<code>(<code><</code> (<code>distance</code> 25 75 30 270) 50)</code>	<code>)</code>
<hr/>	
<i>what the function produces</i>	

<code>(EXAMPLE(</code>	<code>collide?</code>	<code>25 75 100 75)</code>
	<hr/>	<hr/>
	<i>function name</i>	<i>input(s)</i>

<code>(<code><</code> (<code>distance</code> 25 75 100 75) 50)</code>	<code>)</code>
<hr/>	
<i>what the function produces</i>	

Definition

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

<code>(define(</code>	<code>collide?</code>	<code>px py cx cy)</code>
	<hr/>	<hr/>
	<i>function name</i>	<i>variables</i>

<code>(<code><</code> (<code>distance</code> px py cx cy) 50)</code>	<code>)</code>
<hr/>	
<i>what the function does with those variables</i>	