Check for Mistakes in this Word Problem: target-leap

Directions: Write a function which takes in the target's x-coordinate and makes a player leap by returning an x-coordinate that is double the original x-coordinate.

Contrac	t an	d Purpose Sto	ıtem	ent								
Every contrac	t has ti	hree parts										
; target	-lea	ap :		numbe	er			\rightarrow	n	umber		
function	name			domain)					range		
; Takes	the	x-coordinate	and	returns	a	new	one,	multiplied	by	2		
				what does t	the fur	nction do?	?					
Example	es											
Write some ex	ample	es of your function in a	action									
(EXAMPLE(ta	rget-leap	1	100)	(200)))	
	f	function name	in	put(s)				what the function prod	duces			-
(EXAMPLE(ta	rget-leap		40)	(200)))	
	f	function name	in	put(s)				what the function prod	duces			-
Definitio	n											
Write the defir	nition, (giving variable name	es to all	your input vo	alues.							
(define(leap	x-c	oor)							
	fur	nction name	vario	ıbles								
(* x	5))	

what the function does with those variables

Check for Mistakes in this Word Problem: circle-area

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

C	Contract and Purpose Statement																
Ev	ery contrac	t has t	hree parts														
;	circle	e-are	ea :	number							-	→		num	ber		
_	function	n name		domain									rar	nge			
;	Given	the	diameter,	multiply	рi	by	r	adiu	s	squ	ared	d to	o g	ŗet	the	area	
					what	does the	e fur	nction do	οŞ								
E	xample	es															
Wr	ite some ex	kample	es of your functio	n in action													
(E	XAMPLE (ci	rcle-area	10)	(*	(:	sqr	(/	10	2))	pi))
			function name	input	's)		what the fun						nction	ction produces			
(E	EXAMPLE (ci	rcle-area	50)	(*	(:	sqr	(/	50	2))	pi))	
			function name	input		what the function produces											
D	efinitio	n															
Wr	ite the defi	nition,	giving variable r	names to all you	ur inp	ut valu	Jes.										
(c	lefine(area	diameter													
function name				variables													

what the function does with those variables

(* (sqr diameter) pi)

Check for Mistakes in this Word Problem: check-total

Directions: It is customary to tip 20% on a bill at a restaurant. Write a function that takes the total cost of the food and returns the new total including tip.

Contrac	t and	Purpose	Statement	l
very contrac	t has thre	a narts		

Every contract has three parts ...

check-total : number number function name domain range

Returns the total of a check with 20% of the cost added

what does the function do?

Examples

Write some examples of your function in action...

(EXAMPLE(20) 20)) (total 20) (20 (+ (0.2 * function name input(s) what the function produces (EXAMPLE((total 56.67) function name input(s) (56.67 (+ (0.2 * 56.67)56.67)))

what the function produces

Definition

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

(define(check-total food-total function name variables (+ 0.2 food-total) food-total)

what the function does with those variables

)

Check for Mistakes in this Word Problem: enough-carpet?

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.

C	ontrac	t and P	urpo	se Sta	tem	ent								
Eve	ry contrac	t has three	parts											
; ∈	enough-	carpet?	:		1	number	numk	er			\rightarrow	num	ber	
function name domain												rar	nge	
;	Given	length	and	width	of	a roc	om, i	s the	area	ı	<=	100	sq	feet?
						what o	does the fu	nction do?						
E>	kample	es												
Writ	'e some ex	camples of	your fui	nction in a	ction									
(E	XAMPLE (enough-	-carp	et?	(10	15))	(<= (* 10	15)	100))
		functio	on name		in	put(s)				what the	e function pro	oduces		
(E	XAMPLE(enough-	-carp	et?	(9	10))	(<= (* 9	10)	100))
		functio	on name		input(s)					what the	e function pro	unction produces		
D	efinitio	n												
Writ	e the defii	nition, givin	g varia	ble names	to all	your inpu	ut values							
(de	efine(enough-c	carpe	t? le	ngth	widtl	n)							
	_	function	name		variables									

what the function does with those variables

)

(<= (* length width)</pre>

Check for Mistakes in this Word Problem: enough-cash?

Directions: You go the store with \$1.50 in your pocket. Write a function which takes in the price of an item and returns true if you have enough money to buy the item and false if you do not.

C	Contrac	ct ai	nd P	urpo	ose S	itaten	nent								
Eve	ery contra	ct has	three p	parts .											
; enough-cash? :						number]	ooolean	
_	functio	on name	е			domain								range	
;	Check	to	see	if	the	item	costs	less	thai	n 1.	50				
	what does the function do?														
E	Examples														
Wr	ite some e	xamp	les of y	our fu	ınction	in actior	٦								
(EXAMPLE(enough-cash?		2.50)	((>=	1.5	50	2.50))				
			function	n name			input(s)				what t	he funci	ion produce	s	
(E	XAMPLE	(er	nough	-cas	sh?	9.00)	(<	gum	150))
			function	n name			input(s)				what t	he funci	tion produces		
D	efinitio	on													
Wr	ite the def	inition	, giving	g varic	able na	mes to a	ıll your inp	ut values.							
(d	lefine(enc	ough-	casł	ı?	i	tem)							
	-	i	function r	name		va	riables								
		(<= <u>:</u>	item	1.5))

what the function does with those variables

Check for Mistakes in this Word Problem: equal-length?

Directions: Write a function that takes in two strings and returns true if their lengths are equal and false otherwise.

(Contract and Purpose Statement												
Εv	ery contract has three part	'S											
;	egual-length? :	string	string →										

Given two strings, check if they are the same length

what does the function do?

boolean

Examples

Write some examples of your function in action...

what the function produces

Definition

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

what the function does with those variables

Check for Mistakes in this Word Problem: flower-name

Directions: You are putting together a list of flowers in your garden based on their color. You have red roses, purple tulips, and yellow daisies. Write a function that takes in the color of a flower and returns the name of the flower.

flower	r-nam	е :				stri	ng			→ str	ring
functio	n name					domai	'n			ra	nge
Takes	the	name	of	the	flower	and	ret	urns	its	color	
					W	hat does	the fun	ction do?			
Example	es										
/rite some ex	kamples	s of your	funct	ion in c	action						
EXAMPLE(flo	ower-n	ame		"red")	"ros	e")
	fu	unction nai	me		input(s)					what the function produces	
EXAMPLE (flo	ower-r	ame		"tulip	»")	"pur	ple")
	fu	unction nai	me		input(s)					what the function produces	
EXAMPLE (`				"yello	w")	"dai	sy")
	fu	unction nai	me		input(s)					what the function produces	
Definitio	n										
/rite the defi	nition, g	giving va	ıriable	name	s to all your	input v	alues.				
define(_	flow	ver-na	ıme		color)				
	fun	ction name	9		variables						
(cond										
			_	_							
	[(sti	ring=3		lor	"red")				rose'	'	
	[(sti	ring=?	? ac	olor	"purple	")		"t	ulip	п	1
	[(sti	ring=?	? cc	olor	"yellow	·")		"d	laisy	п]
	[else										

Check for Mistakes in this Word Problem: scale-image

Directions: Write a function which takes an image and a string, representing what to scale the image by. The function should return a smaller image if the string is 'smaller' and a bigger image if the string is 'bigger'.

Contract and Purpose Statement			
Every contract has three parts			
; scale-image : image string	\rightarrow	image	
function name domain		range	
; Make the image bigger or smaller, depending on	the given	string	
what does the function do?			
Examples			
Write some examples of your function in action			
(EXAMPLE(scale-image (circle 5 "solid" "red") "bi	gger")		
function name input(s)			
(circle 10 "solid" "red"))
what the function produces			
(EXAMPLE(scale-triangle (triangle 20 "solid" "blue")	"smaller	:")	
function name input(s)		<u>—</u>	
(triangle 10 "solid" "blue"))
what the function produces			
Definition			
Write the definition, giving variable names to all your input values			
(define(scale-image original-image scale-factor)			
function name variables			
(cond			
[(string=? scale-factor "bigger") (scale 2	original	-image)]
[/string=? scale_factor "smaller") /scale () 5 origi	nal_image\	1

original-image

]))

[else