

UC Berkeley's CS10 Spring 2019 Quest – Instructor Dan Garcia

Your Name (first last)

SID

Lab TA's Name

← Name of person on left (or aisle)

Name of person on right (or aisle) →

What's that Smell? Oh, it's Potpourri! (2 pts for 1-6, we drop lowest one)

Fill in the correct circles & squares completely...like this: ● (select ONE) ■ (select ALL that apply)

Question 1: Which of the following is a **true** statement regarding Abstraction? (select ONE)

- A freight company uses *generalization*, since they don't care what's inside the freight container, as long as it adheres to the appropriate specifications (e.g., within weight limits, won't leak, and has no combustibles).
- Harry Beck took the map of the London Underground that had stations equally spaced out and lines only at 0° , 45° , 90° and 135° and made it more geographically accurate, since *details matter*.
- A farmer who writes "put the <animal> food in the <animal dish>" is using *detail removal*.
- A person from 1920 could still use the car radio in today's car thanks to Abstraction.
- None of the Above.

Question 2: What is $18_{16} \div 8_{10}$? (select ONE)

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1 ₂	10 ₂	11 ₂	100 ₂	101 ₂	110 ₂

Question 3: What does **Mystery** report? (select ONE)



<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	30	50	505050	3030303030	300000	5000	5550	333330	Error	Infinite Loop

Question 4: What is the *Domain* and *Range* of **Foo**?
 The expression does not cause an error. (select ALL that apply)



The Domain of Foo is...					The Range of Foo is...				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
numbers	words	sentences	Booleans	lists	numbers	words	sentences	Booleans	lists

(The block here is used for Questions 5 & 6)



Question 5: If **A** and **B** are Booleans, and the output from **Test** is true, which can you say *for sure*? (select ALL that apply)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A must be true	B must be true	A must be false	B must be false	None of these

Question 6: Which of the following is equivalent to the original **Test** block? (select ONE)

○	○	○	○	○
				None of these

Question 7: Say say say...say it isn't so... (2 pts)

This script is intended to say some letters. What gets said? (select ONE)

```

script variables a b c
set a to a
set b to a
set c to b
set a to A
say join a b c
    
```

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aaa	abc	AAA	Abc	Aaa	No Error, but none of these	Error (since you can't set variable a twice)
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Question 8: Happy birthday to me!!... (3 pts)

What gets said if I run the script on the left? Note: We have not yet defined any global variables. (select ONE)

```

script variables my age
set my age to 19
Have Birthday
say my age
    
```

```

Have Birthday
set my age to my age + 1
    
```

I dragged this from under the "set my age to 19" and put it here

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19	20	Error (a variable of name 'my age' does not exist in this context)
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Question 9: Beethoven was a good composer... (5 pts, one each)

You write a block to determine if there are any zeros in a list of numbers (with at least one element), if so it should return true. Will it return the correct value for different inputs?

```

Are there any zeros in data : ?
for each item of data
  if item = 0
    report true
  else
    report false
report false
    
```

There is exactly one element in the list, and it is zero.	yes <input type="radio"/> <input type="radio"/> no
There is exactly one element in the list, and it is not zero.	yes <input type="radio"/> <input type="radio"/> no
The list has all zeros.	yes <input type="radio"/> <input type="radio"/> no
The list has no zeros.	yes <input type="radio"/> <input type="radio"/> no
The code works correctly for all inputs.	yes <input type="radio"/> <input type="radio"/> no

Question 10: Two maps are better than one! (or are they?) (5 pts)

Of the six expressions:

- a)
- b)
- c)
- d)
- e)
- f)

	a	b	c	d	e
b	<input type="checkbox"/>				
c	<input type="checkbox"/>	<input type="checkbox"/>			
d	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

...which are *always equivalent* for **all** **DATA** lists and **all** mappers ? Said another way, which pairs will *always* report the same value? (select ALL that apply; selecting a particular box means you are declaring that the expression in the row will always have the same value as the expression in the column **for all input**.)

You did it!! Congratulations!!