

Wednesday, March 7

Name Solutions

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Miniquiz #14

5 Minutes

Given the following program:

```
foo = fun(x) {  
  return x - 4;  
};  
y = foo(7);
```

Fill out the information that's present in the MITScript VM before the red instruction is executed:

IP	OP	LOCALS
7		
	7	

GLOBALS
foo
y

IP	OP	LOCALS
2	7	x = 7
	4	

HEAP
closure { foo: , ctx: [] }

```
function {  
  functions = [ ],  
  constants = [None, 0, 7],  
  names = [foo, y],  
  instructions = [  
    load_const 1  
    load_func 0  
    alloc_closure  
    store_global 0  
    load_global 0  
    load_const 2  
    call 1  
    store_global 1  
    pop  
    load_const 0  
    return  
  ]  
}
```

```
function {  
  local_vars = [x],  
  constants = [None, 4],  
  instructions = [  
    load_local 0  
    load_const 1  
    sub  
    store_local 1  
    load_local 0  
    return  
  ]  
}
```