

Algorithm Workbench

1. Write a function named `times_ten`. The function should accept an argument and display the product of its argument multiplied times 10.
2. Examine the following function header, then write a statement that calls the function, passing 12 as an argument.

```
def show_value(quantity):
```

3. Look at the following function header:

```
def my_function(a, b, c):
```

Now look at the following call to `my_function`:

```
my_function(3, 2, 1)
```

When this call executes, what value will be assigned to `a`? What value will be assigned to `b`? What value will be assigned to `c`?

4. What will the following program display?

```
def main():  
    x = 1  
    y = 3.4  
    print(x, y)  
    change_us(x, y)  
    print(x, y)  
  
def change_us(a, b):  
    a = 0  
    b = 0  
    print(a, b)  
  
main()
```

5. Look at the following function definition:

```
def my_function(a, b, c):  
    d = (a + c) / b  
    print(d)
```

- a. Write a statement that calls this function and uses keyword arguments to pass 2 into `a`, 4 into `b`, and 6 into `c`.
 - b. What value will be displayed when the function call executes?
6. Write a statement that generates a random number in the range of 1 through 100 and assigns it to a variable named `rand`.
 7. The following statement calls a function named `half`, which returns a value that is half that of the argument. (Assume the `number` variable references a `float` value.) Write code for the function.

```
result = half(number)
```

8. A program contains the following function definition:

```
def cube(num):  
    return num * num * num
```

Write a statement that passes the value 4 to this function and assigns its return value to the variable `result`.