
Sample Quiz 6 Answers

February 28, 2022

C

1. In this function definition, what is the parameter?

```
void rollDice(int numSides) {  
    int d = 1 + int(random(numSides));  
    println("Rolling... " + d);  
}
```

- | | |
|-------------|------------------|
| A) void | C) numSides |
| B) rollDice | D) d |
| | E) None of these |

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2. In this function definition, what is the return type?

```
void rollDice(int numSides) {  
    int d = 1 + int(random(numSides));  
    println("Rolling... " + d);  
}
```

- | | |
|-------------|------------------|
| A) void | C) numSides |
| B) rollDice | D) d |
| | E) None of these |

1. Explain, on each numbered line, what Processing is doing in the following code. /*7 points*/

```
void setup() {  
  float yourWeight = 132; ____[1]____  
  float marsWeight = calculateMars(yourWeight); ____[2]____  
  println(marsWeight); ____[3]____  
}  
  
float calculateMars(float w) { ____[4]____  
  float newWeight = w * 0.38; ____[5]____  
  return newWeight; ____[6]____  
}
```

1. Declares float variable `yourWeight` and assigns it the value 132.
2. Declares float variable `marsWeight` and assigns it the return value of the `calculateMars` function, using the variable `yourWeight` as the argument.
3. Prints the value of `marsWeight` to the console.
4. Function definition for `calculateMars`: returns a float and has one float parameter, `w`.
5. Declares variable `newWeight` and assigns it value of `w * 0.38`.
6. Returns the value of `newWeight` when `calculateMars` is called.

2. Explain, on each numbered line, what Processing is doing in the following code. /*9 points*/

```
void setup() {  
  size(480, 120);  
  fill(255); ____[1]____  
  drawSquare(0, 0, 120); ____[2]____  
  drawSquare(420, 60, 60); ____[3]____  
}  
  
void drawSquare(int x, int y, int size) { ____[4]____  
  stroke(0); ____[5]____  
  rect(x, y, size, size); ____[6]____  
}
```

1. Sets the fill color to white.
2. Calls the drawSquare function and passes in 0, 0, and 120 as arguments.
3. Calls the drawSquare function and passes in 420, 60, and 60 as arguments.
4. Function definition for drawSquare: no return value, takes 3 integer parameters: x, y, and size.
5. Sets stroke to black.
6. Draws a rectangle with top left corner at (x, y) and width and height equal to the value of size.

3. Write a Processing program (sized 400x600) that uses the drawSquare function above to draw two **blue** squares with the following specifications: /*5 points*/

- The first square should start at (60, 40) and have a width and height of 30.
- The second square should start at (120, 160) and have a width and height of 50.

```
void setup() {  
  size(400,600);  
  fill(#0000FF);  
  drawSquare(60, 40, 30);  
  drawSquare(120, 160, 50);  
}  
void drawSquare(int x, int y, int size) {  
  stroke(0);  
  rect(x, y, size, size);  
}
```

