Sample Quiz 6 Answers

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`
B) `rollDice`
C) `numSides`
D) `d`
E) None of these

A 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
B) rollDice
C) numSides
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);
}
```