# Lab 3: Chapter 3, “Using Classes and Objects” SOLUTION

The solutions for all Lab 3 questions are listed below. The following exercises are intended to help you apply and practise the concepts introduced in this module. This work is **not** submitted for marks.

1. Write a statement that prints the number of characters in a String object called overview.

**SOLUTION**

System.out.println(overview.length());

1. Write a statement that prints the eighth character of a String object called introduction.

**SOLUTION**

System.out.println(introduction.charAt(7));

1. What output is produced by the following code fragment?

String m1, m2, m3;  
m1 = "Quest for the Holy Grail";  
m2 = m1.toLowerCase();  
m3 = m1 + " " + m2;  
System.out.println ( m3.replace('h', 'z'));

**SOLUTION**

Quest for tze Holy Grail quest for tze zoly grail

1. Assuming that a Random object has been created called generator, what is the range of the result of each of the following expressions?
2. generator.nextInt(20)
3. generator.nextInt(8) + 1
4. generator.nextInt(45) + 10
5. generator.nextInt(100) – 50

**SOLUTION**

1. 0 to 19
2. 1 to 8
3. 10 to 54
4. -50 to 49
5. Write an assignment statement that computes the square root of the sum of num1 and num2 and assigns the result to num3.

**SOLUTION**

num3 = Math.sqrt(num1 + num2);

1. Write a single statement that computes and prints the absolute value of total.

**SOLUTION**

System.out.println(Math.abs(total));

1. Write code statements to create a DecimalFormat object that will round a formatted value to four decimal places. Then write a statement that uses that object to print the value of the result, properly formatted.

**SOLUTION**

DecimalFormat fmt = new DecimalFormat("0.####");  
System.out.println (fmt.format(Math.PI));

1. Write a declaration for an enumerated type that represents the days of the week.

**SOLUTION**

enum Days {sun, mon, tue, wed, thu, fri, sat}