EX 3.4 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'));

Answer 3.4)

Output will be: **Quest for tze Holy Grail quest for tze zoly grail**

**Explanation is below**👇

public class Try {

public static void main(String[] args) {

String m1, m2, m3;

m1 = "Quest for the Holy Grail"; //Given original string

m2 = m1.toLowerCase(); // Lowering all the character by creating variable of original sting

m3 = m1 + " " + m2; // The original string is concatenated with a lowercase version of itself

System.*out*.println (m3.replace('h', 'z')); //then all lowercase ‘h’ characters are replaced with ‘z’.

}

}

EX 3.6 Assuming that a Random object has been created called generator, what is the range of the result of each of the following expressions?

a. generator.nextInt(20)

b. generator.nextInt(8)+1

c. generator.nextInt(45)+10

d. generator.nextInt(100)-50

Answer 3.6)

A.from 0 to 19 included

B.from 1 to 8 included

C.from 10 to 54 included

D.from -50 to 49 included

EX 3.7 Write code to declare and instantiate an object of the Random class (call the object reference variable rand). Then write a list of expressions using the nextInt() method that generates random numbers in the following specified ranges, including the endpoints.

a. 0 to 10

b. 0 to 500

c. 1 to 10

d. 1 to 500

e. 25 to 50

f. -10 to 15

Answer 3.7)

a. generator.nextInt(11)

b. generator.nextInt(501)

c. generator.nextInt(10)+1

d. generator.nextInt(500)+1

e. generator.nextInt(26)+25

f. generator.nextInt(26)-108

EX 3.8 Write an assignment statement that computes the square root of

the sum of num1 and num2 and assigns the result to num3.

Answer 3.8)

Output will be: 5

Single Statement: System.*out*.println (Math.*sqrt*(num1+num2));

public class Try3 {

public static void main(String[] args) {

int num1 = 22;

int num2=3;

int num3= (int) Math.*sqrt*(num1+num2);

System.*out*.println(num3);

}

}

EX 3.9 Write a single statement that computes and prints the absolute

value of total.

Answer 3.9)

Single Statement: System.*out*.println (Math.*abs*(total));

import java.util.Scanner;

public class Try4 {

public static void main(String[] args) {

System.*out*.print("Total value: ");

Scanner input = new Scanner(System.*in*);

double total = input.nextDouble();

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

double amount = input.nextDouble();

}

}