**RAT 2**

**Quiz 1.**

1. Population Census

To represent the population census data in Kotlin, we can define two variables for the number of females and males, respectively. We can then use a function to calculate the total population and return the result as an integer.

fun main() {

val numFemales = 2600000

val numMales = 1900000

fun calculateTotalPopulation(): Int {

return numFemales + numMales

}

val totalPopulation = calculateTotalPopulation()

println("Total population: $totalPopulation")

}

**Quiz 2.**

Crop Distribution

To distribute the crops proportionally, we need to first calculate the total area of the land and then divide it among the three crops based on their ratios. We can use three parameters to represent the ratios of maize, beans, and vegetables, respectively. The function should return the area of land allocated to each crop.

fun main() {

val totalArea = 2.0 // acres

val maizeRatio = 0.4

val beansRatio = 0.3

val vegRatio = 0.3

fun distributeCrops(): Triple<Double, Double, Double> {

val maizeArea = totalArea \* maizeRatio

val beansArea = totalArea \* beansRatio

val vegArea = totalArea \* vegRatio

return Triple(maizeArea, beansArea, vegArea)

}

val (maizeArea, beansArea, vegArea) = distributeCrops()

println("Maize: $maizeArea acres, Beans: $beansArea acres, Vegetables: $vegArea acres")

}

**Quiz 3.**

Fixing Errors and Function Call

The code below has several errors. To fix them, we need to change the return type of the function to Boolean, add quotes around the variable name in the second line, and remove the quotes around the return value in the last line. We also need to change the variable type of myAge to String to allow string concatenation in the println statement.

fun myDetails(name: String, age: Int): Boolean {

val myName = "My name is: $name"

val myAge = "$age"

println("$myName \n I am $myAge years old")

return true

}

fun main() {

myDetails("John", 25)

}

**Quiz 4.**

Comparing Two Numbers

To compare two numbers and return the maximum, we can use two parameters for the numbers and use an if-else statement to check which number is greater. We can then return the greater number as an integer.

fun main() {

fun getMax(num1: Int, num2: Int): Int {

return if (num1 > num2) num1 else num2

}

val result = getMax(10, 5)

println("Max number: $result")

}

**Quiz 5.**

Default Values for Kingdom Animalia

To display the default values for the members of Kingdom Animalia, we can define two variables for the kingdom and population, respectively. We can then use a function to print the values of these variables.

fun main() {

val kingdom = "mammal"

val population = 120