```
# Harvardx: PH125.1x - (1) Data Science: R Basics
# SECTION 1: R BASICS, FUNCTIONS, AND DATA TYPES
# ASSESSMENTS


# # # ASSESSMENT 1.2: R BASICS & FUNCTIONS

# # USING VARIABLES 1

# Here is how you compute the sum for the first 20 integers
[redacted]

# However, we can define a variable to use the formula for other
 values of n
[redacted]

[redacted]

# Below, write code to calculate the sum of the first 100 integers
[redacted]


# # USING VARIABLES 2

# Below, write code to calculate the sum of the first 1000 integers
[redacted]


# # NESTED FUNCTIONS CALLS 1

# log to the base 2
[redacted]

# sqrt of the log to the base 2 of 16:
[redacted]

# Compute log to the base 10 (log10) of the sqrt of 100. Do not use
 variables.
[redacted]
```

```
# # # ASSESSMENT 1.3: DATA TYPES

# # VARIABLE NAMES

# Load package and data

[redacted]

# Use the function names to extract the variable names
[redacted]


# # EXAMINING VARIABLES

# To access the population variable from the murders dataset use this
 code:
[redacted]

# To determine the class of object `p` we use this code:
[redacted]

# Use the accessor to extract state abbreviations and assign it to a
[redacted]
# Determine the class of a
[redacted]


# # MULTIPLE WAYS TO ACCESS VARIABLES

# We extract the population like this:
[redacted]

# This is how we do the same with the square brackets:
[redacted]

# We can confirm these two are the same
[redacted]

# Use square brackets to extract `abb` from `murders` and assign it
 to b
[redacted]
# Check if `a` and `b` are identical
[redacted]
```

FACTORS

We can see the class of the region variable using class
[redacted]

Determine the number of regions included in this variable
[redacted]

TABLES

Here is an example of what the table function does
[redacted]

Write one line of code to show the number of states per region
[redacted]

SECTION 1 ASSESSMENT

Q1
[redacted]

Q2
[redacted]

Q3a
[redacted]

Q3b
[redacted]

Q3c
[redacted]

Q3d
[redacted]

Q4
[redacted]