```r
# Yannique Hecht
# 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
█████████

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

██████
█████████


# Below, write code to calculate the sum of the first 100 integers
████████
█████████



# # USING VARIABLES 2

# Below, write code to calculate the sum of the first 1000 integers
████████
████████



# # NESTED FUNCTIONS CALLS 1

# log to the base 2
████████

# sqrt of the log to the base 2 of 16:
███████████

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

ASSESSMENT 1.3: DATA TYPES

VARIABLE NAMES

Load package and data

██████████████
█████████

Use the function names to extract the variable names

████████████

EXAMINING VARIABLES

To access the population variable from the murders dataset use this
 code:
████████████████████

To determine the class of object `p` we use this code:
███████

Use the accessor to extract state abbreviations and assign it to a
██████████████
Determine the class of a
████████

MULTIPLE WAYS TO ACCESS VARIABLES

We extract the population like this:
████████████████████

This is how we do the same with the square brackets:
███████████████████████

We can confirm these two are the same
█████████████

Use square brackets to extract `abb` from `murders` and assign it
 to b
█████████████████
Check if `a` and `b` are identical
█████████████

FACTORS

We can see the class of the region variable using class
███████████████████

Determine the number of regions included in this variable
██████████████████████

TABLES

Here is an example of what the table function does
████████████████████████████
████████

Write one line of code to show the number of states per region
██████████████████

SECTION 1 ASSESSMENT

Q1
███████████████
████
█████
█████
████████████████████
████████████████████

Q2
███████████████

Q3a
████████████

Q3b
███████████

Q3c
███████████

Q3d
███████████

Q4
██████████████████