Worksheet 1

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Problem 1

```
install.packages("here")
library(here)
set_here()
here()
here("week1_files")
```

Problem 2

```
heights_df <- read.csv(here("week1_files", "heights.csv"))
summary(heights_df)
sum(heights_df$height)
```

Response:
##86427

Problem 3

```
#Print hello world to console
"hello world"

#String concatentation
x <- "hello"
y <- "world"
x + y #Incorrect string concatentation
paste(x, y, sep = " ", collapse = NULL) #Correctly concatenates string
paste0(x, y, collapse = NULL) #Concatenates string with no space in between
```

Response:
```
## [1] "hello world"
## Error in x + y : non-numeric argument to binary operator
## [1] "hello world"
## [1] "helloworld"
```

The addition operator (+) cannot be used for string concatenation in R. String concatenation can be performed using the paste or paste0 function, where paste0 concatenates its input together with no seperating characters and paste concatenates its input with a given seperator character in between.

Problem 4

```
x <- 1:10
x
x[5] <- "cat"
x
x[5] <- TRUE
x
x <- 1:10
x[5] <- TRUE
x
```

Response:

```
##  [1]  1  2  3  4  5  6  7  8  9 10      ##  [1] "1"   "2"   "3"   "4"   "cat" "6"   "7"
"8"   "9"   "10"       ##  [1] "1"    "2"    "3"    "4"    "TRUE" "6"    "7"    "8"    "9"
"10" ##  [1]  1  2  3  4  1  6  7  8  9 10
```

When the fifth element of x is changed to "cat", all the elements of x change from integers to strings as well. When the fifth element is changed to TRUE, it becomes "TRUE" - that is, it remains a string. If we changed the fifth element of x when it is all integers to TRUE, we see that it instead changes to 1 - that is, it remains an integer. Thus, we can establish that the coercian hierarchy is, from bottom to top, with the top taking the most priority, logical types, integers, and finally strings.