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Weekly challenge 2

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1. A data analyst is assigning a variable to a value in their company's sales dataset for 2020. Which variable name uses the correct syntax? **1 / 1 point**

- `-sales-2020`
- `_2020sales`
- `2020_sales`
- (•) `sales_2020`

Correct
The variable with the correct syntax is `sales_2020`. A variable name in R may contain numbers and underscores as well but not as the first character.

2. You want to create a vector with the values 21, 12, 39, in that exact order. After specifying the variable, what R code chunk allows you to create the vector? **1 / 1 point**

- `v(39, 12, 21)`
- `c(39, 12, 21)`
- `v(21, 12, 39)`
- (•) `c(21, 12, 39)`

Correct
The code chunk `c(21, 12, 39)` allows you to create a vector with the values 21, 12, 39. A vector is a group of data elements of the same type stored in a sequence in R. You can create a vector by putting the values you want inside the parentheses of the combine function.

3. An analyst comes across dates listed as strings in a dataset, for example `December 10th, 2020`. To convert the strings to a date/time data type, which function should the analyst use? **1 / 1 point**

- lubridate()
- (•) mdy()
- now()
- datetime()

Correct
To convert the strings to date/time data types, the analyst should use the function mdy(). The mdy() function and other variations of the ymd() function convert string dates and times into date/time data types that are compatible with R.

4. A data analyst inputs the following code in RStudio:
`sales_1 <- (3500.00 * 12)`
Which of the following types of operators does the analyst use in the code? Select all that apply. **1 / 1 point**

- [x] Assignment

Correct
In the code `sales_1 <- (3500.00 * 12)`, the analyst uses an assignment (<-) and an arithmetic (*) operator. The assignment operator assigns the calculated value in parentheses to the variable sales_1 and the arithmetic operator multiplies the values in parentheses to complete the calculation.

- [ ] Logical
- [x] Arithmetic

Correct
In the code `sales_1 <- (3500.00 * 12)`, the analyst uses an assignment (<-) and an arithmetic (*) operator.

The assignment operator assigns the calculated value in parentheses to the variable sales_1 and the arithmetic operator multiplies the values in parentheses to complete the calculation.

- [ ] Relational

5. Which of the following files in R have names that follow widely accepted naming convention rules? Select all that apply. **1 / 1 point**

- [ ] title*123.R
- [x] patient_details_1.R

✓ **Correct**
The files with names that follow widely accepted naming convention rules are patient_data.R and patient_details_1.R. These file names end in .R and use only lowercase letters, numbers, and underscores. They are also clear, concise, and meaningful.

- [x] patient_data.R

✓ **Correct**
The files with names that follow widely accepted naming convention rules are patient_data.R and patient_details_1.R. These file names end in .R and use only lowercase letters, numbers, and underscores. They are also clear, concise, and meaningful.

- [ ] p1+infoonpatients.R

6. Which of the following are included in R packages? Select all that apply. **1 / 1 point**

- [x] Sample datasets

✓ **Correct**
R packages include reusable R functions, sample datasets, and tests for checking your code. R packages also include documentation about how to use the included functions.

- [ ] Naming conventions for R variable names
- [x] Tests for checking your code

✓ **Correct**
R packages include reusable R functions, sample datasets, and tests for checking your code. R packages also include documentation about how to use the included functions.

- [x] Reusable R functions

✓ **Correct**
R packages include reusable R functions, sample datasets, and tests for checking your code. R packages also include documentation about how to use the included functions.

7. What is the relationship between RStudio and CRAN? **1 / 1 point**

- ○ RStudio and CRAN are both environments where data analysts can program using R code.
- ◉ RStudio installs packages from CRAN that are not in Base R.
- ○ CRAN contains all of the data that RStudio users need for analysis.
- ○ CRAN creates visualizations based on an analyst's programming in RStudio.

✓ **Correct**
RStudio installs packages from CRAN that are not in Base R. CRAN is an online archive with R packages and other R-related resources that makes sure the resources are authentic and valid.

8. A data analyst is reviewing some code and finds the following code chunk: **1 / 1 point**

```
mtcars %>%
    filter(carb > 1) %>%
    group_by(cyl) %>%
```

What is this code chunk an example of?

- ○ Data frame
- ○ Vector
- ◉ Pipe
- ○ Nested function

✓ **Correct**

The code chunk is an example of a pipe. A pipe is a tool for expressing a sequence of multiple operations in R (in this case filtering and grouping). The operator for a pipe is %>%.