

Exer 3.2

[Computation/data/data103]

Here are some useful operators for taking a quick look at data frames:

<code>names</code>	Lists the names of the components.
<code>ncol</code>	Tells how many components there are.
<code>nrow</code>	Tells how many lines of data there are.
<code>head</code>	Prints the first several lines of the data frame.

Here are some examples of these commands applied to the C02 data frame:

```
> data(C02) # read in the data to an object named C02
> names(C02)
[1] "Plant"      "Type"      "Treatment" "conc"      "uptake"
> ncol(C02)
[1] 5
> nrow(C02)
[1] 84
> head(C02)
  Plant  Type Treatment conc uptake
1  Qn1 Quebec nonchilled  95  16.0
2  Qn1 Quebec nonchilled 175  30.4
3  Qn1 Quebec nonchilled 250  34.8
4  Qn1 Quebec nonchilled 350  37.2
5  Qn1 Quebec nonchilled 500  35.3
6  Qn1 Quebec nonchilled 675  39.2
```

- The data frame `iris` records measurements on flowers. You can read in with

```
> data(iris)
```

creating an object named `iris`.

Use the above operators to answer the following questions.

1. Which of the following is the name of a column in `iris`?

flower Color Species Length Exer 3.2-1

2. How many rows are there in `iris`?

1 50 100 150 200 Exer 3.2-2

3. How many columns are there in `iris`?

2 3 4 5 6 7 8 10 Exer 3.2-3

4. What is the Sepal.Length in the third row?

1.2 3.6 4.2 4.7 5.9 Exer 3.2-4

- The data frame `mtcars` has data on cars from the 1970s. You can read it in with
`> data(mtcars)`

creating an object named `mtcars`.

Use the above operators to answer the following questions.

1. Which of the following is the name of a column in `mtcars`?

carb color size weight wheels Exer 3.2-5

2. How many rows are there in `mtcars`?

30 31 32 33 34 35 Exer 3.2-6

3. How many columns are there in `mtcars`?

7 8 9 10 11 Exer 3.2-7

4. What is the `wt` in the second row?

2.125 2.225 2.620 2.875 3.215 Exer 3.2-8