

# DangerZone Week 01: Revvin' up your engines!

Pushing the envelope

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## Self-Assessment Questions

### Fill-In-The-Blanks (`fitb()`)

Create fill-in-the-blank questions using `fitb()`, providing the answer as the first argument.

- `2 + 2` is `_`
- What is the letter after D? `_`

If you want to ignore differences in whitespace use, use the argument `ignore_ws = TRUE` (which is the default) and include spaces in your answer anywhere they could be acceptable.

- How do you load the tidyverse package? `_____`

You can set more than one possible correct answer by setting the answers as a vector.

- Type a vowel: `_`

You can use regular expressions to test answers against more complex rules.

- Type any 3 letters: `___`

**Multiple Choice (`mcq()`)**

- “Never gonna give you up, never gonna:
- (A) let you go
- (B) turn you down
- (C) run away
- (D) let you down

” - “I

- (A) bless the rains
- (B) guess it rains
- (C) sense the rain  
down in Africa” -Toto

**True or False (`torf()`)**

- True or False? You can permute values in a vector using `sample()`. TRUE / FALSE

**Longer MCQs (`longmcq()`)**

When your answers are very long, sometimes a drop-down select box gets formatted oddly. You can use `longmcq()` to deal with this. Since the answers are long, It’s probably best to set up the options inside an R chunk with `echo=FALSE`.

**What is a p-value?**

- (A) the probability that the null hypothesis is true
- (B) the probability of the observed, or more extreme, data, under the assumption that the null-hypothesis is true
- (C) the probability of making an error in your conclusion

**What is true about a 95% confidence interval of the mean?**

- (A) 95% of the data fall within this range
- (B) if you repeated the process many times, 95% of intervals calculated in this way contain the true mean
- (C) there is a 95% probability that the true mean lies within this range

## Checked sections

Create sections with the class `webex-check` to add a button that hides feedback until it is pressed. Add the class `webex-box` to draw a box around the section (or use your own styles).

I am going to learn a lot: TRUE / FALSE

What is a p-value?

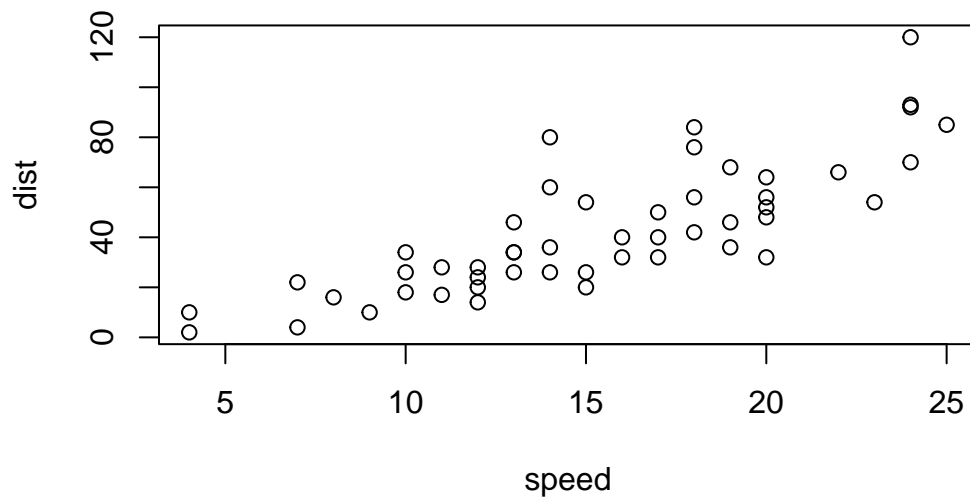
- (A) the probability that the null hypothesis is true
- (B) the probability of the observed, or more extreme, data, under the assumption that the null-hypothesis is true
- (C) the probability of making an error in your conclusion

## Hidden solutions and hints

You can fence off a solution area that will be hidden behind a button using `hide()` before the solution and `unhide()` after, each as inline R code. Pass the text you want to appear on the button to the `hide()` function.

If the solution is a code chunk, instead of using `hide()` and `unhide()`, simply set the `webex.hide chunk` option to `TRUE`, or set it to the string you wish to display on the button.

**Recreate the scatterplot below, using the built-in `cars` dataset.**



I need a hint

See the documentation for `plot()` (`?plot`)

[Click here to see the solution](#)

```
plot(cars$speed, cars$dist)
```