

Confidence intervals

What is a confidence interval?

Understand what it means when you give a confidence interval (this is important!)

Incidentally, usually we use *CI*'s for means, but they can be constructed for other statistics as well.

Know the properties of the normal curve.

For example, understand what it means if we want:

$$Pr\{z_1 < Z < z_2\} = .90 \quad (\text{what are } z_1 \text{ and } z_2?)$$

Why can't we use the normal distribution? Why do we need to use the *t*-distribution instead?

What is the *t*-distribution, and how do you use it?

Make sure you understand how to use the *t*-tables (and how to calculate *d.f.* (= *v*))

Be able to construct confidence intervals for specific examples.

For example, if you're given *n*, *s* and \bar{y} , you should be able to construct a *CI*.

Remember: always round down if your calculated *d.f.* are not in the table.

As mentioned above, make sure you know exactly what a *CI* tells us, and what it does NOT tell us.