VISUAL SUMMARY

Single-Sample *t* Tests

Before You Begin: State H_0 and H_1.
Compute $\overline{X}$, μ, σ, or S.

Do you have σ?

Yes   No

Compute the
standard error of the mean:

$$\sigma_{\overline{X}} = \frac{\sigma}{\sqrt{n}}$$

Estimate the
standard error of the mean:

$$estimated\ \sigma_{\overline{X}} = \frac{S}{\sqrt{n}}$$

Compute *t:*

$$t = \frac{\overline{X} - \mu}{\sigma_{\overline{X}}}$$

Compute *t:*

$$t = \frac{\overline{X} - \mu}{estimated\ \sigma_{\overline{X}}}$$

Compute the
degrees of freedom:

$$df = n - 1$$

Find the critical value in
Table T

If $|t|$ > critical value,
reject H_0