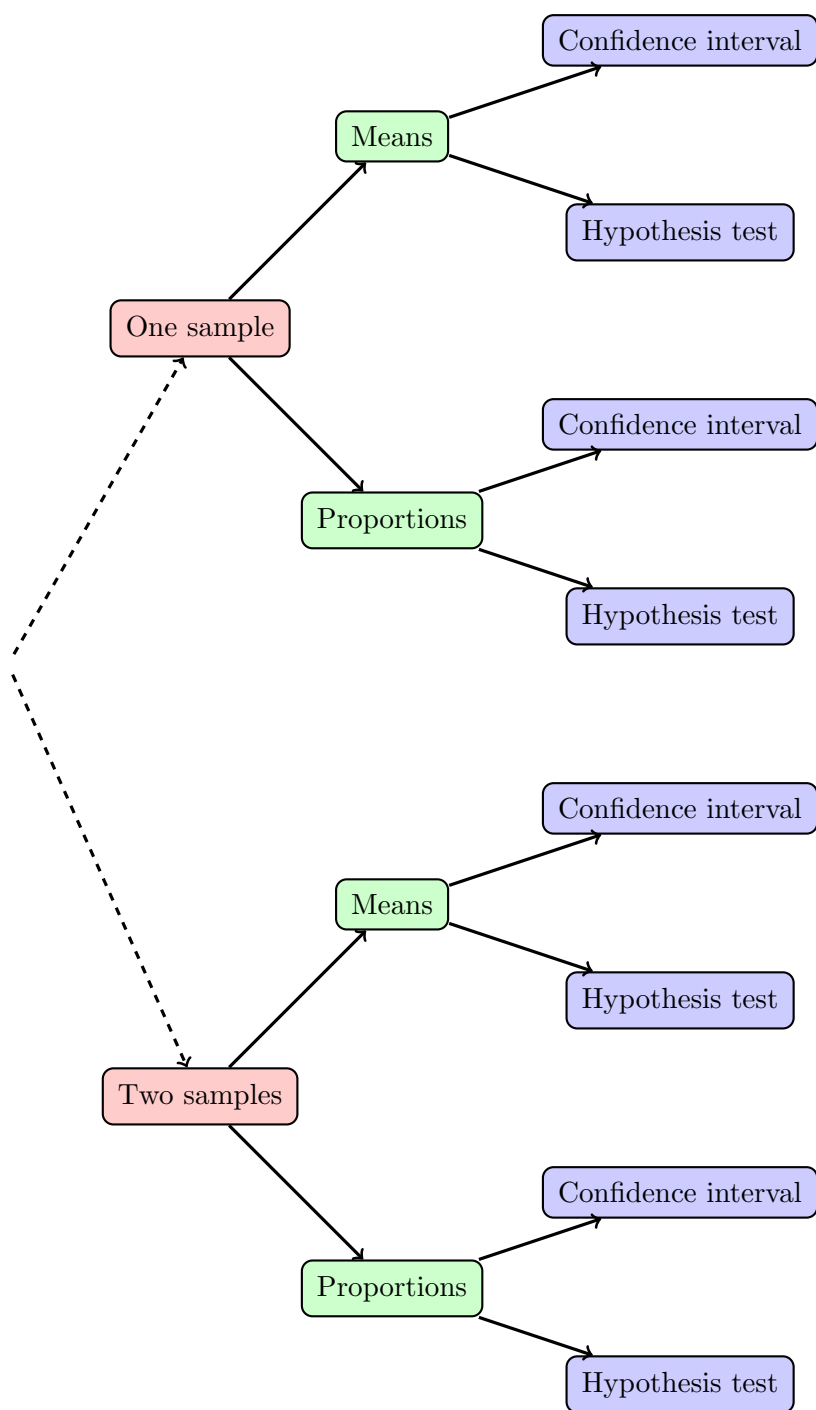


Choosing The Right Method

To decide which of the eight formulas to use, ask these three questions:

1. Is there one sample or two samples?
2. Do you have averages of quantitative data (means) or percentages of categorical data (proportions)?
3. Are you asking a yes/no question (hypothesis test) or estimating a number (confidence interval)?



$$\bar{x} \pm t^* \frac{s}{\sqrt{n}}$$

$$t = \frac{\bar{x} - \mu_0}{s/\sqrt{n}}$$

$$\hat{p} \pm z^* \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$$

$$z = \frac{\hat{p} - p_0}{\sqrt{\frac{p_0(1-p_0)}{n}}}$$

$$\bar{x}_A - \bar{x}_B \pm t^* \sqrt{\frac{s_A^2}{n_A} + \frac{s_B^2}{n_B}}$$

$$t = \frac{\bar{x}_A - \bar{x}_B}{\sqrt{\frac{s_A^2}{n_A} + \frac{s_B^2}{n_B}}}$$

$$\hat{p}_A - \hat{p}_B \pm z^* \sqrt{\frac{\hat{p}_A(1-\hat{p}_A)}{n_A} + \frac{\hat{p}_B(1-\hat{p}_B)}{n_B}}$$

$$z = \frac{\hat{p}_A - \hat{p}_B}{\sqrt{\hat{p}(1-\hat{p}) \left(\frac{1}{n_A} + \frac{1}{n_B} \right)}}$$