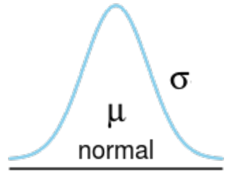
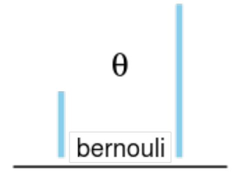
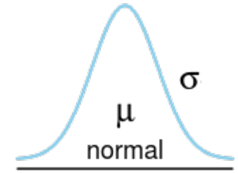
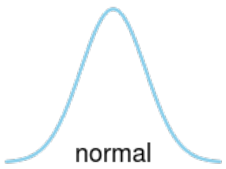
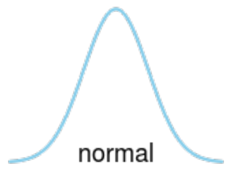
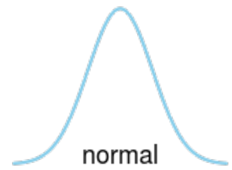
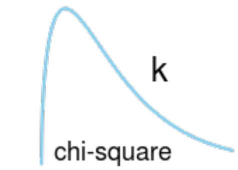
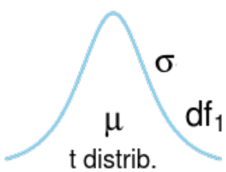
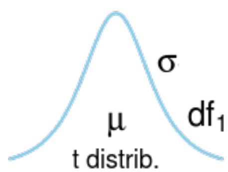
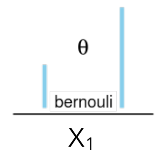
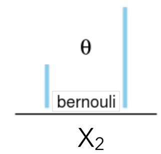
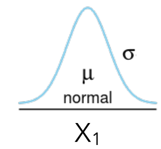
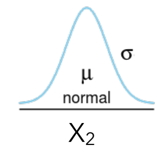
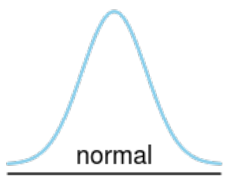
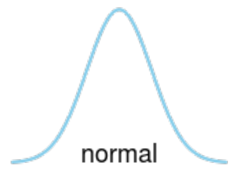
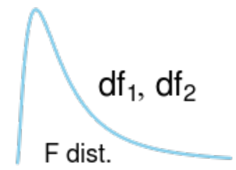
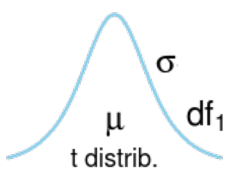
Population distribution	$X \sim ???(\mu\ ,\sigma)$			
Repeatedly take samples of size *n* and calculate…	$\bar{X}$	$\bar{X}$	$p = \frac{\sum x}{n} = \text{proportion}$	$\frac{(n-1)s^2}{\sigma^2}$
The distribution of those sample statistics will approximate…	 (if n is large and σ is known)	 (if σ is known)		
with parameters…	$\mu_{\bar{X}} = \mu$ $\sigma_{\bar{X}} = \frac{\sigma}{\sqrt{n}}$	$\mu_{\bar{X}} = \mu$ $\sigma_{\bar{X}} = \frac{\sigma}{\sqrt{n}}$	$\mu_p = \frac{\sum x}{n}$ $\sigma_p = \sqrt{\frac{p(1-p)}{n}}$	$k = n-1$ $\mu = k$ $\sigma = 2k$
Other notes:	If σ must be estimated from the data, then the distribution is:  where $\mu_{\bar{X}} = \mu$ $\sigma_{\bar{X}} = \frac{\sigma}{\sqrt{n}}$ $df = n-1$	If σ must be estimated from the data, then the distribution is:  where $\mu_{\bar{X}} = \mu$ $\sigma_{\bar{X}} = \frac{\sigma}{\sqrt{n}}$ $df = n-1$		Notice that this only holds when the population follows a normal distribution.

Population distributions	$X_1 \sim ???(\mu_1, \sigma_1)$ $X_2 \sim ???(\mu_2, \sigma_2)$	 	 
Repeatedly take samples of size *n* and calculate…	$\bar{X}_1 - \bar{X}_2$	$p_1 - p_2$	$\dfrac{\sigma^2_{\text{bigger}}}{\sigma^2_{\text{smaller}}}$
The distribution of those sample statistics will approximate…	 (if n values are large and σ values are known)	 (if n values are large)	
with parameters…	$\mu_{\bar{X}_1-\bar{X}_2} = \mu_1 - \mu_2$ $\sigma_{\bar{X}_1-\bar{X}_2} = \sqrt{\dfrac{\sigma_1^2}{n_1} + \dfrac{\sigma_2^2}{n_2}}$	$\mu_{p_1-p_2} = p_1 - p_2$ $\sigma_{p_1-p_2} = \sqrt{\left(\dfrac{1}{n_1} + \dfrac{1}{n_2}\right)\left(\dfrac{n_1 p_1 + n_2 p_2}{n_1 + n_2}\right)\left(1 - \dfrac{n_1 p_1 + n_2 p_2}{n_1 + n_2}\right)}$	$df_1 = n_1 - 1$ $df_2 = n_2 - 1$
Other notes:	If σ must be estimated from the data, then the distribution is:  where $\mu_{\bar{X}_1-\bar{X}_2} = \mu_1 - \mu_2$ $\sigma_{\bar{X}_1-\bar{X}_2} = \sqrt{\left(\dfrac{1}{n_1} + \dfrac{1}{n_2}\right)\dfrac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$ $df = n_1 + n_2 - 2$		