Nature of the population	Parameter	H_0	H_a	TS	Reject H_0 if TS is
Normal Distribution with σ^2 known	μ	$\mu = \mu_0$	1. $\mu > \mu_0$ 2. $\mu < \mu_0$ 3. $\mu \neq \mu_0$	$\dfrac{\bar{x} - \mu}{\dfrac{\sigma}{\sqrt{n}}}$	1. greater than z_α 2. less than $-z_\alpha$ 3. less than $-z_{\frac{\alpha}{2}}$ *or* greater than $z_{\frac{\alpha}{2}}$
Normal Distribution with σ^2 unknown and "small" sample size	μ	$\mu = \mu_0$	1. $\mu > \mu_0$ 2. $\mu < \mu_0$ 3. $\mu \neq \mu_0$	$\dfrac{\bar{x} - \mu}{\dfrac{s}{\sqrt{n}}}$	1. greater than $t_{n-1,\,\alpha}$ 2. less than $-t_{n-1,\,\alpha}$ 3. less than $-t_{n-1,\,\frac{\alpha}{2}}$ *or* greater than $t_{n-1,\,\frac{\alpha}{2}}$
σ^2 unknown and "large" sample size, not necessarily normal	μ	$\mu = \mu_0$	1. $\mu > \mu_0$ 2. $\mu < \mu_0$ 3. $\mu \neq \mu_0$	$\dfrac{\bar{x} - \mu}{\dfrac{s}{\sqrt{n}}}$	1. greater than z_α 2. less than $-z_\alpha$ 3. less than $-z_{\frac{\alpha}{2}}$ *or* greater than $z_{\frac{\alpha}{2}}$
Population proportion	p	$\hat{p} = p$	1. $\hat{p} > p$ 2. $\hat{p} < p$ 3. $\hat{p} \neq p$	$\dfrac{\hat{p} - p}{\sqrt{\dfrac{pq}{n}}}$	1. greater than z_α 2. less than $-z_\alpha$ 3. less than $-z_{\frac{\alpha}{2}}$ *or* greater than $z_{\frac{\alpha}{2}}$
Normal distribution	σ	$\sigma = \sigma_0$	1. $\sigma > \sigma_0$ 2. $\sigma < \sigma_0$ 3. $\sigma \neq \sigma_0$	$\dfrac{(n-1)s^2}{\sigma_0^2}$	1. greater than $\chi^2_{n-1,\,\alpha}$ 2. less than $\chi^2_{n-1,\,1-\alpha}$ 3. less than $\chi^2_{n-1,\,1-\frac{\alpha}{2}}$ *or* greater than $\chi^2_{n-1,\,\frac{\alpha}{2}}$