***z*-score**	***t*-score**
$z = \frac{\bar{x} - \mu}{\frac{\sigma}{\sqrt{n}}}$	$t = \frac{\bar{x} - \mu}{\frac{s}{\sqrt{n}}}$

Problem 1 – Large Sample, $\alpha = 0.05$

Read the problem given on page 1.2.

1.3: Write the null and alternative hypotheses.

1.4: Will you need to find a *z*-score or *t*-score? Why?

1.6: test statistic: _____ critical value: _____ 1.7: *P*-value: _____

1.8: Do you reject or fail to reject H_0? Why?

Problem 2 – Large Sample, $\alpha = 0.01$

Perform the test again, this time with $\alpha = 0.01$.

2.1: critical value: _____

2.2: Do you reject or fail to reject H_0? Why?

Problem 3 – Small Sample, $\alpha = 0.05$

Suppose the sample mean and standard deviation came from a sample of 25 residents instead of 100 residents.

3.2: Will you need to find a *z*-score or *t*-score? Why?

3.3: test statistic: _____ critical value: _____ 3.4: *P*-value: _____

3.5: Do you reject or fail to reject H_0? Why?

Problem 4 – Extension

In the *Calculator* application, use the **z Test** or **t Test** from the Stat Tests menu to find the test statistic and *P*-value for sample sizes between 25 and 100.

Explain how these values change and why.