1.

Gulf View Condominiums

	GV List	GV Sales	GV Days
Mean	474.01	454.22	106.00
Median	437.00	417.50	96.00
Standard Deviation	197.29	192.52	52.22
Minimum Value	169.90	165.00	28.00
Maximum Value	975.00	975.00	282.00
Number of Observations	40	40	40
Standard Error of the Mean	31.19	30.44	8.26

2.

No Gulf View Condominiums

	NGV List	NGV Sale	NGV Days
Mean	212.81	203.19	135.00
Median	212.50	203.50	126.00
Standard Deviation	48.95	43.89	76.30
Minimum Value	148.00	135.50	48.00
Maximum Value	322.00	292.50	338.00
Number of Observations	18	18	18
Standard Error of the Mean	11.54	10.35	17.98

3. As we can see by the descriptive statistics, Gulf View Condominiums sell for approximately $251.03 thousand more than No Gulf View Condominiums, on average. I would find this numerical observation to be correct, as condos that have an ocean view consistently sell for more than condos with no ocean view. The average list price for condos with a gulf view is $474.01 thousand and the average list price for condos without a gulf view is $212.81 thousand. The average sell price for condos with a gulf view is $454.22 thousand and the average sell price for condos without a gulf view is $203.19 thousand. As you can see, condos with a gulf view sell for nearly double the amount of condos without a gulf view. The median list and sale price for condos with a gulf view is $437 thousand and $417.50 thousand, respectively. The median list and sale price for condos without a gulf view is $212.50 thousand and $203.50 thousand, respectively. Through these observations, we can convey to our prospective buyers that our condos meet all price ranges, from $135.50 thousand to $975.00

thousand. Obviously, if they are looking for a condo on the gulf, they are going to pay twice as much for that condo than for a condo that isn't on the gulf. The standard deviation of the list prices for gulf view condos is $197.29 thousand, and the standard deviation of the list prices for non gulf view condos is $48.95 thousand. The gulf view condos vary three times as much as the non gulf view condos, as more of their units are included in a portion closer to the average.

The average number of days to sell a gulf view condo is 106 and the average number of days to sell a non gulf view condo is 135. Obviously, since gulf view condos are in higher demand, they sell quicker than non gulf view condos. The number of sale days is quite surprising considering how expensive some of the condos are listed for. The quickest sale time was 28 days for a gulf view condo and the longest sale time was 338 days for a non gulf view condo.

The actual sale price for a gulf view condo drops 4.2% from its original average list price. The actual sale price for a non gulf view condo drops 4.5% from its original average list price. Because there isn't much of a difference between the two, it just goes to show that prospective buyers will suggest an offer similar to the same percent drop for both types of condos.

4. **95% Confidence Interval for Sales Prices of Gulf View Condominiums**
μ=454.22 , s=192.52 , n=40 , $\bar{x}=\mu$, $\bar{x}=454.22$
Degrees of Freedom = n-1 , =40-1, =39 , $\alpha/2$=0.025, $t_{\frac{\alpha}{2}} = 2.023$

Use the following formula:
$$\bar{x} \pm t_{\alpha/2}\, \sigma_{\bar{x}}$$

$$454.22 \pm 2.023 \left(\frac{192.52}{\sqrt{40}} \right) = (392.64 , 515.80)$$

Therefore, there is a 95% confidence interval of (392.64 , 515.80).

95% Confidence Interval for Days to Sell of Gulf View Condominiums
μ=106.00 , s=52.22 , n=40 , $\bar{x}=\mu$, $\bar{x}=106.00$
Degrees of Freedom = n-1 , =40-1, =39 , $\alpha/2$=0.025, $t_{\frac{\alpha}{2}} = 2.023$

Use the following formula:
$$\bar{x} \pm t_{\alpha/2}\, \sigma_{\bar{x}}$$

$$106.00 \pm 2.023 \left(\frac{52.22}{\sqrt{40}} \right) = (89.3 \, , \, 122.70)$$

Therefore, there is a 95% confidence interval of (89.3 , 122.70).

5. **95% Confidence Interval for Sales Prices of Non-Gulf View Condominiums**
$\mu=203.19$, s=43.89 , n=18 , $\bar{x} = \mu$, $\bar{x} = 203.19$
Degrees of Freedom = n-1 , =18-1, =17 , $\alpha/2=0.025$, $t_{\frac{\alpha}{2}} = 2.110$

Use the following formula:

$$\bar{x} \pm t_{\alpha/2} \, \sigma_{\bar{x}}$$

$$203.19 \pm 2.110 \left(\frac{43.89}{\sqrt{18}} \right) = (181.362 \, , \, 225.018)$$

Therefore, there is a 95% confidence interval of (181.362 , 225.018).

95% Confidence Interval for Days to Sell Non-Gulf View Condominiums
$\mu=135.00$, s=76.30 , n=18 , $\bar{x} = \mu$, $\bar{x} = 135.00$
Degrees of Freedom = n-1 , =18-1, =17 , $\alpha/2=0.025$, $t_{\frac{\alpha}{2}} = 2.110$

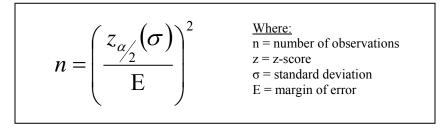Use the following formula:

$$\bar{x} \pm t_{\alpha/2} \, \sigma_{\bar{x}}$$

$$135.00 \pm 2.110 \left(\frac{76.30}{\sqrt{18}} \right) = (97.05 \, , \, 172.95)$$

Therefore, there is a 95% confidence interval of (97.05 , 172.95).

6. For Gulf View condos, the sample size should be about 89 for a 95% confidence interval, with a margin of error of $40,000. For the Non Gulf View condos, the sample size should be about 32.89, or 33 for a 95% confidence interval, with a margin of error of $15,000. To calculate the sample size, I used the following formula:

$$n = \left(\frac{z_{\alpha/2}(\sigma)}{E} \right)^2 \qquad \begin{array}{l} \underline{\text{Where:}} \\ n = \text{number of observations} \\ z = \text{z-score} \\ \sigma = \text{standard deviation} \\ E = \text{margin of error} \end{array}$$

7. **Two new acquisitions: GV = $589,000 , NGV = $285,000**
For GV condos, the final sell price is 4.2% lower than the list price, so the condo will probably sell for about $24,738 less than the asking price, making it sell for $564,262 in about 106 days. For NGV condos, the final sell price is about 4.5% lower than the list price, so the condo will probably sell for about $12,825 less than the asking price, making it sell for $272,175 in about 135 days. These numbers are solely estimates, yet they offer some sort of reassurance for the owners trying to sell their condo.