

## CHAPTER 10: RE-EXPRESSING DATA: GET IT STRAIGHT!

### Goals for Re-expressing Data

- Histograms:
- Box plots:
- Scatter plots:

### Re-expressing & Conditions:

### Re-expressing & statements about $R^2$ and residual values

- $R^2$
- Residuals

### Making Predictions

$$\sqrt{\widehat{population}} = 1.46275 + 0.7457(year); R^2 = 99.3\%$$

1. Write a statement about the  $R^2$  value
2. Predict the population in 2005
3. Predict the population in 2010

Use the given re-expressed models to make predictions.

4.  $\log(\widehat{bacteria}) = 1.56 + 0.45(\text{time}); \text{ time} = 23 \text{ minutes and } 40 \text{ minutes}$

5.  $\sqrt[3]{\widehat{bacteria}} = 3.69 + 3.012(\text{length}); \text{ length} = .13\text{m and } 1.2 \text{ m}$

6.  $\log(\widehat{bullseye}) = 0.72 + 0.61 \log(\text{distance}); \text{ distance} = 50 \text{ m and } 125 \text{ m}$