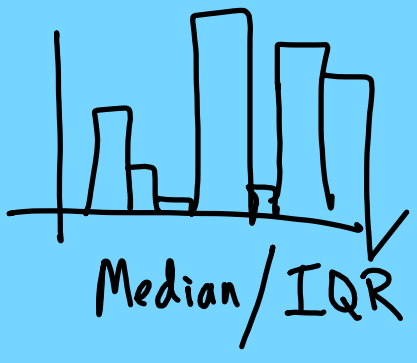
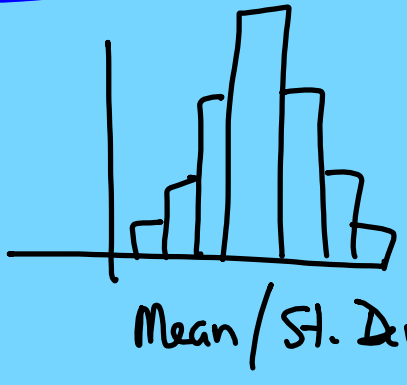
# Stat Review




Calculator – Menu - Stat - Calc. – 1-VAR STATS

Mean
St. Dev
Med.
Range

– Histogram / Box Plot
- Data + Stat page
- Plot Type
- Histogram Properties - Bin Settings

## By hand

- Mean, Median, Mode
- Range, IQR, st dev

## Outliers

1) IQR * 1.5 = #
2) Upper bound = $Q_3$ + #
3) Lower bound = $Q_1$ − #

$\{8, 15, 23, 34\}$

Find st. dev.

1) $\bar{x} = \frac{80}{4} = 20$

2) Data − Mean

$8-20$

$= (-12)^2 + (-5)^2 + (3)^2 + (14)^2$

$= 144 + 25 + 9 + 196$

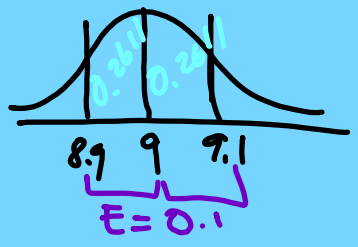
$= \sqrt{\frac{374}{4}} = \_\_\_$

## Normal Distrib – population data

11–13

$$z = \frac{x - \mu}{\sigma}$$

What % of questions answered falls between 8.9 – 9.1




$$E = z \cdot \sigma_{\bar{x}}$$

$$0.1 = z \cdot 0.141$$

$$0.71 = z$$

0.2611
0.2611
0.5222

## Samples – Confidence Intervals

14–17

$$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}}$$

$$E = z \cdot \sigma_{\bar{x}}$$

$$\bar{x} \pm E$$

Sch. Bowl correct answers.

$\bar{x} = 9$ $s = 1.2$ $n = 72$

Find 95% conf. interval


$$\sigma_{\bar{x}} = \frac{1.2}{\sqrt{72}} = 0.141$$

$$E = z \cdot \sigma_{\bar{x}}$$

$$E = 1.96 \cdot 0.141$$

$$E = 0.276$$

$$9 \pm 0.276$$

$$8.724 - 9.276$$