

STATISTICS REVIEW

28th

$$\text{Med} = \frac{55}{2} = 27.5 \leftarrow 28^{\text{th}}$$

$$Q = \frac{27}{2} = 13.5 = 14^{\text{th}}$$

SS #s

Outliers

- 1) $IQR * 1.5 = \#$
- 2) $Q_1 - \# = \text{lower boundary}$
- 3) $Q_3 + \# = \text{upper boundary}$

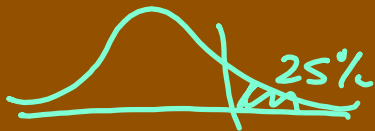
Normal Distrib

$$\#11-13 \quad Z = \frac{x - \mu}{\sigma}$$

Calculator

Normal CDF = gives %

Inv Norm = Find raw score



$$\mu = 50 \quad \sigma = 6$$

Inv Norm (%, μ , σ)

↑
% to the left!

What % of voters fall
between 35 yr + 45 yr?

Confidence Interval / Sample

#14-16

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

Sample of 25
Mean Shoe size
of NCTS males

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

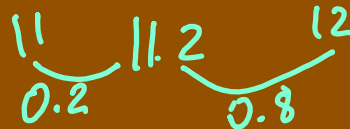
$$\bar{x} \pm E$$

$$\mu = 11.2$$

$$\sigma = 0.8$$

$$\sigma_{\bar{x}} = \frac{0.8}{\sqrt{25}} = 0.16$$

What % fall between 11 + 12?



$$E = 0.2$$

$$E = 0.8$$

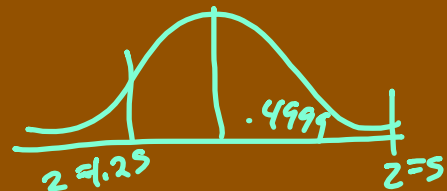
$$E = \sigma_{\bar{x}} \cdot z$$

$$0.2 = 0.16 \cdot z$$

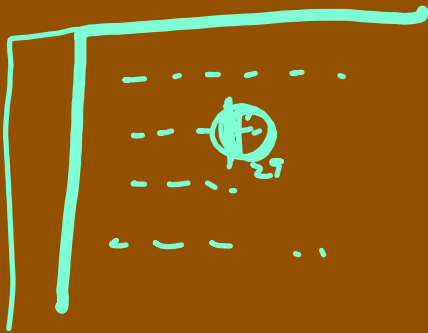
$$1.25 = z$$

$$0.8 = 0.16 \cdot z$$

$$5 = z$$



STAT REVIEW



$$\frac{58}{2} = 29^{\text{th}} + 30^{\text{th}}$$

$$\frac{29}{2} = 14.5 = 15$$

Outliers

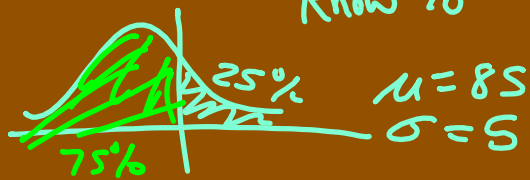
- 1) $IQR \times 1.5 = \#$
- 2) $Q_3 + \# = \text{upper boundary}$
- 3) $Q_1 - \# = \text{lower boundary}$

#11-13 Normal Distribution
- population data

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

Normal CDF = Find %

Inv Norm - Find raw score
Know %



#14-16 - Sample data

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

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

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

Calories - Sampled 25 lunches

$$\bar{x} = 500$$

$$s = 50$$

What is the prob that a lunch will have 450-525 calories



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

$$50 = z \cdot 10$$

$$5 = z$$

$$25 = z \cdot 10$$

$$2.5 = z$$