

FINAL EXAM

1. $n=12$
 $\mu = 35$
 $\sigma = 11$

$$35 - 13 = 22 \text{ (2SD)}$$
$$57 - 35 = 22 \text{ (2SD)}$$

-2SD \rightarrow 2SD is 95%

2. $P(B|M) = 14/29 = .4827$

3. $\mu = 70.9$
 $\sigma = 7.4$
 $x = 68$

$$\frac{68 - 70.9}{7.4} = -0.39$$

Z score of $-0.39 = .3483$

$$1 - .3483 = .6517$$

4. $M = 4$

$$\sigma = 0.9$$

$$(2.4, 4.2)$$

used statcrunch normal calculator

$$P(2.4 \leq x \leq 4.2) = 0.5502$$

5. used statcrunch \rightarrow two sample + summary

Sample 1 / Consultant A

$$\mu = 6.8$$

$$\sigma = 0.41$$

$$n = 24$$

Sample 2 / Consultant B

$$\mu = 6.52$$

$$\sigma = 0.59$$

$$n = 16$$

$$H_0: \mu_1 - \mu_2 = 0$$

$$H_a: \mu_1 - \mu_2 > 0$$

$$t\text{-stat} = 1.6511$$

$$p\text{-value} = 0.0557$$

6. used statcrunch \rightarrow t-stats \rightarrow paired

$$t\text{-stat} = -1.1307$$

$$p\text{-value} = 0.1386$$

7. used statcrunch \rightarrow one sample proportion stats

$$\# \text{ of successes} = 27$$

$$\# \text{ of observations} = 94$$

$$H_0: p = 0.3$$

$$H_a: p > 0.3$$

$$t\text{-stat} = 1.218$$

$$p\text{-value} = 0.1117$$