

1.

a) One way T-test

b) $H_0 = 13.5$ or more
 $H_a < 13.5$

$$t < -1.415 \quad df = 7$$

c) $p = 0.07 > 0.05$

Take null hypothesis but if critical point of 13.5 p value is in 0.05-0.10

$$2. (5.1517 \cdot 10^6, 5.3283 \cdot 10^6)$$

3. a) Two Sample T-test

$$b) t = 1.5273 \quad |t| > 1.33 \checkmark$$

True

c) Reject Null hypothesis

d) Test/Sample

40 a) Pair T-Test

b) $t = -3.490935$

~~c)~~ $|t| > 2.3646$

c ~~d~~) $p = 0.01 < 0.05 \checkmark$

Reject Null Hypothesis

d) is slower/less effective

5. a) 14.4535

b) $|t| > 10.64$

c) Independent