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(a)

Diet A ($n_1 = 5$): 3, 4, 2, 5, 3
Diet B ($n_2 = 6$): 6, 5, 7, 4, 8, 6

Hypothesis:-

Let μ_A & μ_B be the true mean weight loss for Diet A and Diet B

$\Rightarrow H_0 : \mu_A = \mu_B$

"If there is no ~~weight Average~~ difference in average weight loss between Diet A and Diet B"

$\Rightarrow H_1 : \mu_A \neq \mu_B$

"There is a difference in average weight loss between Diet A and Diet B"

(b) Diet A:-

$$\Sigma x_A = 3+4+2+5+3 = 17$$

$$\bar{x}_A \text{ mean} = \frac{\Sigma x_A}{n_1} = \frac{17}{5} = 3.4 \qquad \boxed{\bar{x}_A = 3.4}$$

Diet B:

$$\Sigma x_B = 6+5+7+4+8+6 = 36$$

$$\bar{x}_B = \frac{\Sigma x_B}{n_2} = \frac{36}{6} = 6 \qquad \boxed{\bar{x}_B = 6}$$

mean of Diet A = 3.4
mean of Det B = 6.0

Based on average values Diet B appears to be more effective as weight loss is greater when average is caliculated as per ab