

Question 1

$$S = \sqrt{30df}$$

$$S = \sqrt{30(44).15}$$

$$S = \sqrt{198}$$

$$S = 14.07 \text{ MPH}$$

Question 2

$$\sqrt{S^2 + 30df}$$

$$\sqrt{43^2 + 30(.60)184}$$

$$\sqrt{1849 + 3312}$$

$$\sqrt{5161}$$

$$S = 71.84 \text{ MPH}$$

Question 3

$$S = 14.07 \text{ MPH}$$

$$V = 20.62 \text{ FPS}$$

$$a = 32.2 \cdot .15 = 4.83$$

$$t = \frac{V_1 - V_2}{a}$$

$$t = \frac{20.62 - 0}{4.83}$$

$$t = 4.2 \text{ Seconds}$$

Question 4

$$t = \frac{V_1 - V_2}{a}$$

$$t = \frac{105.31 - 63.03}{19.32}$$

$$t = 2.11 \text{Seconds}$$

$$d = 2.09 \cdot 105.31$$

$$d = 220.09 \text{Feet}$$

$$d = 220.09 \text{Feet} + 184 \text{Feet}$$

$$d = 404.09 \text{ft}$$

Question 5

$$d = 184 + 105.31 \cdot 1.5$$

$$d = 341.96 \text{ feet}$$

$$80.63 \text{ fps} \cdot 1.5 \text{ sec} = 120.94 \text{ feet}$$

$$d = \frac{S^2}{30 f}$$

$$d = \frac{55^2}{30 \cdot .60} = 168.05 \text{ feet}$$

$$120.94 + 168.05 = 288.99 \text{ feet}$$