

5

$$PE = mgh$$

$$m = 492.50 \text{ kg}$$

$$h = 16.50 \text{ m}$$

$$g = 9.8 \text{ m/s}^2$$

$$PE = 492.50 \times 16.50 \times 9.8$$

$$= 196372.5 \text{ J}$$

4

$$KE = \frac{1}{2}mv^2$$

$$M = 12.50 \text{ g} = \frac{12.50}{1000} \text{ kg}$$

$$V = 490 \times 470.50 \text{ mL}$$

$$f = 490.50 \times 0.0125$$

$$2.9406 \text{ J}$$

$$\frac{3967 \times 0.25}{9 \times 60}$$

2.3

$$Power = \frac{Energy}{Time}$$

$$\frac{mgh}{t} = \frac{440 \times 19 \times 9.8}{41}$$

$$1998.24 \text{ J/s}$$

$$1.9982 \text{ kW}$$

3.

$$Power = \frac{Energy}{Time}$$

$$810 = \frac{398.50 \times 9 \times 9.8}{t}$$

t

$$t = 42.8 \text{ sec}$$

$$g) 151 \text{ g} = 3.2 \times 10^{-2} \text{ lb}$$

$$= 593.349 \times 3.2 \times 10^{-2} \times 2045 = 394.5632 \text{ m}$$

$$h = 593.349 \times 0.15$$

$$Power = \frac{PE}{t}$$

$$1898.56 \times 25$$

$$9 \times 60$$

$$Total \text{ force} = 3600 + 1619.60$$