

P #7

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$$m = 75.0 \text{ kg}$$

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

$$d = ?$$

$$F = \text{Weight} = m \cdot g$$

$$= (75.0 \text{ kg})(9.8 \text{ m/s}^2)$$

$$F = 735 \text{ N}$$

$$W = 500 \text{ Cal} \cdot \frac{1000 \text{ cal}}{1 \text{ Cal}} \cdot \frac{4.186 \text{ J}}{1 \text{ cal}} = 2.09 \times 10^6 \text{ J}$$

$$W = F \cdot d \quad (2.09 \times 10^6 \text{ J}) = (735 \text{ N}) \cdot d$$

$$d = 2850 \text{ m}$$