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34.

$$a = 2.6 \text{ m/s}^2$$

$$m = M$$

$$F_{\text{net}} = ma$$

$$F = (2.6 \text{ m/s}^2) M$$

now this same force acts on  $2M$

$$F_{\text{net}} = ma$$

$$(2.6 \frac{\text{m}}{\text{s}^2}) \cancel{M} = 2\cancel{M} a$$

$$a = \frac{2.6 \text{ m/s}^2}{2}$$

$$a = 1.3 \text{ m/s}^2$$

OR

$$a = \frac{F_{\text{net}}}{m}$$

$$a \propto \frac{1}{m}$$

35.

$$a = \frac{F_{\text{net}}}{m}$$

$$a' = \frac{5F_{\text{net}}}{2m}$$

$$a' = \frac{5}{2} \left( \frac{F_{\text{net}}}{m} \right)$$

$$a' = \frac{5}{2} a$$