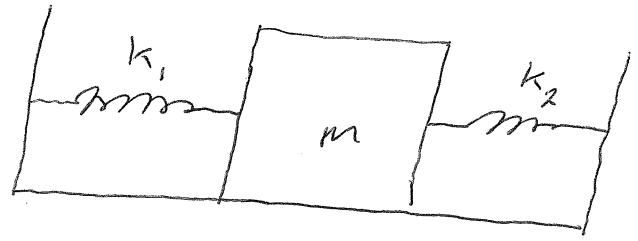
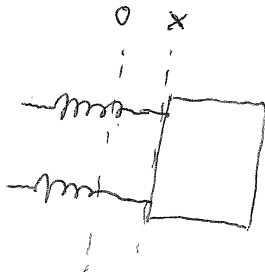
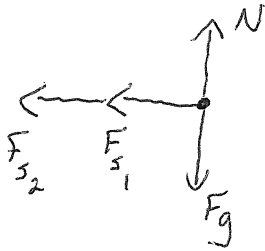


block 1



block 2

1) Find the effective spring constant.



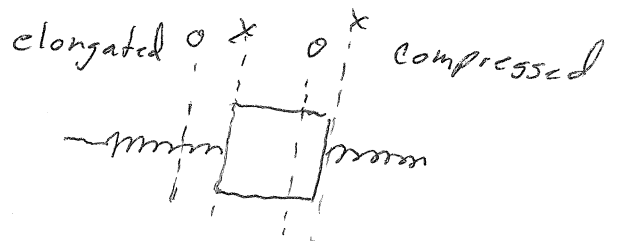
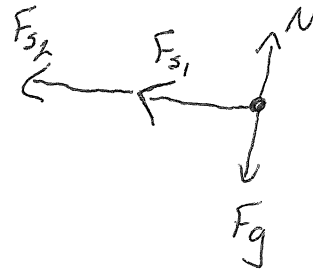
$$F_1 = k_1 x$$

$$F_2 = k_2 x$$

$$k_1 = k_2$$

$$F_{1+2} = kx + kx = (2k)x$$

combined
spring
constant



$$F_1 = k_1 x$$

$$F_2 = k_2 x$$

$$k_1 = k_2$$

$$F_{1+2} = kx + kx = (2k)x$$

combined
spring
constant

2) Determine the period of each block.

$$T = 2\pi \sqrt{\frac{m}{k}}$$

$$m = 1.25 \text{ kg}$$

$$k = 49.2 \text{ N/m}$$

$$k_{\text{effective}} = 2k$$

$$= 2\pi \sqrt{\frac{1.25 \text{ kg}}{2(49.2 \text{ N/m})}}$$

$$= 0.708 \text{ s}$$

for both since both have the same $k_{\text{effective}}$.