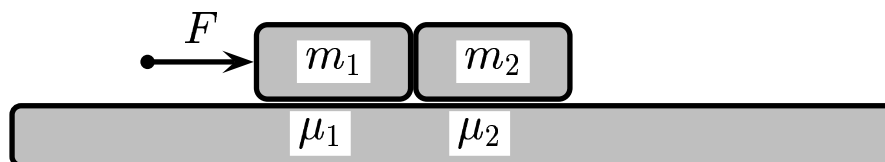


F pushes the two blocks on a horizontal rough surface. Assume $m_1 = m_2 = 1 \text{ kg}$. $F = 20 \text{ N}$.



Would the blocks move for $\mu_s = 0.6$ and $\mu_k = 0.4$?

A) No, they would not.

B) Yes, they would.

Hint: $f_s^{max} = \mu_s N$. $F - f_k = m a$.

$$f_s^{max} = \mu_s N = \mu_s (2 m g) = (0.6) (2) (1 \text{ kg}) (10 \text{ m/s}^2) = 12 \text{ N}.$$

The force pushing to the right, $F = 20 \text{ N}$, is stronger than f_s^{max} , so the blocks move to the right.

Answer **B**.

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