60. (a) The box doesn't move until $t = 2.8$ s, which is when the applied force $\vec{F}$ reaches a magnitude of $F = (1.8)(2.8) = 5.0$ N, implying therefore that $f_{s,\,\max} = 5.0$ N. Analysis of the vertical forces on the block leads to the observation that the normal force magnitude equals the weight $N = mg = 15$ N. Thus, $\mu_s = f_{s,\,\max}/N = 0.34$.

(b) We apply Newton's second law to the horizontal x axis (positive in the direction of motion).

$$F - f_k = ma \quad \Longrightarrow \quad 1.8t - f_k = (1.5)(1.2t - 2.4)$$

Thus, we find $f_k = 3.6$ N. Therefore, $\mu_k = f_k/N = 0.24$.