2-32. A 15-kg ball *A* strikes a 5-kg block *B* that is at rest. The coefficient of restitution between *A* and *B* is $e = 0.5$, and the coefficient of kinetic friction between the floor and the block is $\mu_k = 0.4$. If the velocity of the ball just before the strike is normally distributed $(v_A)_1 \sim N(20, 2^2)$ m/s, determine the probability that the block stops sliding in 6 seconds.

Solution: $\Pr\{t < 6\} = 0.68$.