

59. Referring to the numbers in Sample Problem 16-7, we have $m = 0.25$ kg, $b = 0.070$ kg/s and $T = 0.34$ s. Thus, when $t = 20T$, the damping factor becomes

$$e^{-bt/2m} = e^{-(0.070)(20)(0.34)/2(0.25)} = 0.39 .$$