6. A tank initially contains 20 L of water. A solution containing 5 g/L of salt flows into the tank at a rate of 11 L/min., and the well stirred mixture flows out at a rate of 3 L/min. Which of the following describes $A(t)$, the amount of salt in the tank at time t before the tank becomes full?

A. $\frac{dA}{dt} = 55 - \frac{A}{20+8t}$, $A(0) = 10$

B. $\frac{dA}{dt} = 55 - \frac{A}{20+3t}$, $A(0) = 0$

C. $\frac{dA}{dt} = 55 - \frac{A}{8+8t}$, $A(0) = 0$

D. $\frac{dA}{dt} = 55 - \frac{3A}{20+8t}$, $A(0) = 0$

E. $\frac{dA}{dt} = 55 - \frac{3A}{20+3t}$, $A(0) = 10$