

A tank initially contains 60 gallons of pure water. Brine containing 1lb of salt per gallon enters the tank at 2 gal/min, and the (perfectly mixed) solution leaves the tank at 3 gal/min; thus, the tank is empty after exactly 1 hr.

a) Find the amount of salt in the tank after t minutes.

b) What is the maximum amount of salt ever in the tank?