MNTC P01 - Week #9 - Differential Equations and Engineering

1. A 150 litre tank initially contains 60 litres of water with 0.5 kgs of salt dissolved in it. Water enters the tank at a rate of 0.9 litres/hr and the water entering the tank has a salt concentration of $\frac{1}{5}(1+\cos(t))$ kgs/litre. If a well mixed solution leaves the tank at a rate of 0.6 litres/hr, how much salt is in the tank when it overflows?