

$$1. A = 2 - C, B = 2 - C$$

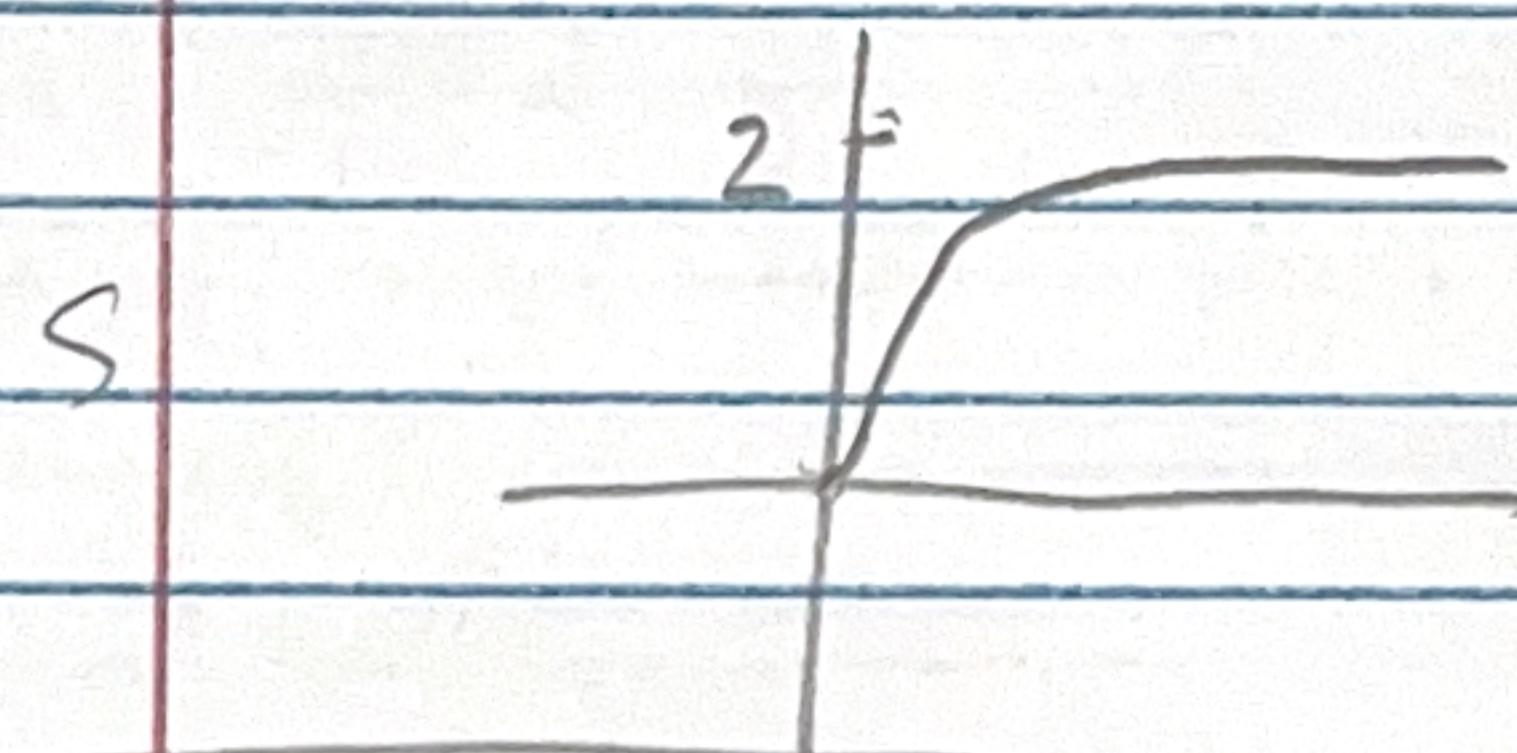
$$2 \frac{dC}{dt} = 7 [A][B] = 7 (2-C)^2$$

$$3 \int \frac{1}{(2-C)} \frac{dC}{dt} dt = \int 7 dt$$

$$\frac{1}{(2-C)} = 7t + 2 - C \quad \frac{1}{7t} = 2 - C$$

$$C = 2 - \frac{1}{7t+1}$$

$$4. C = \frac{1}{7t+1} \quad t=0$$



$$\#3 \text{ work} \quad \int \frac{1}{(2-Z)(5-2Z)} \frac{dZ}{dt} dt = 5 \quad \text{Specific } Z = \frac{2.5 + 2A}{1+A} = 0$$

$$\frac{-2A}{2Z-5} + \frac{B-1}{2-2Z}$$

$$2.5 - 2$$

$$\ln \left| \frac{2.5 - 2}{2 - 2Z} \right| = 5t + C$$

$$\frac{2.5 - 2}{2Z} = Ae^{st} \quad 2 - 2Ae^{st}$$

$$2.5 - 2Ae^{st} = Ae^{st}Z + 2 = 2C + Ae^{st}$$