

Desarrollo de procedimientos.

Ecuación por resolver:

$$D(t) = \frac{L_0 * K_1}{K_2 - K_1} (e^{-k_1 * t} - e^{-k_2 * t}) - D_0 e^{-k_2 * t}$$

Datos a)

$$L_0 = -0.5$$

$$K_1 = -0.3$$

$$K_2 = 2$$

$$D_0 = -5$$

Ecuación resuelta con los datos.

$$D(t) = \frac{L_0 * K_1}{K_2 - K_1} (e^{-k_1 * t} - e^{-k_2 * t}) - D_0 e^{-k_2 * t}$$

$$D(t) = \frac{(-0.5) * (-0.3)}{2 - (-0.3)} (e^{-(-0.3) * t} - e^{-(2) * t}) - (-5) e^{-(2) * t}$$

$$D(t) = \frac{(-0.5) * (-0.3)}{2 + 0.3} (e^{0.3 * t} - e^{-2 * t}) + 5 e^{-2 * t}$$

$$D(t) = \frac{0.15}{2.3} (e^{0.3 * t} - e^{-2 * t}) + 5 e^{-2 * t}$$

$$D(t) = 0.065 (e^{0.3 * t} - e^{-2 * t}) + 5 e^{-2 * t}$$

$$D(t) = 0.065 (-e^{1.7 * t}) + 5 e^{-2 * t}$$

$$D(t) = -0.065 e^{1.7 * t} + 5 e^{-2 * t}$$

$$D(t) = -0.065 e^{1.7 * t} Dt(1.7) + 5 e^{-2 * t} Dt(-2t)$$

$$D(t) = -0.065 e^{1.7 * t} (-1.7) + 5 e^{-2 * t} (-2)$$

$$D(t) = 0.1105 e^{1.7 * t} - 10 e^{-2 * t}$$

Datos b)

$$L_0 = 9$$

$$K_1 = 2.6$$

$$K_2 = 1.5$$

$$D_0 = 5$$

Ecuación resuelta con los datos.

$$D(t) = \frac{L_0 * K_1}{K_2 - K_1} (e^{-k_1 * t} e^{-k_2 * t}) - D_0 e^{-k_2 * t}$$

$$D(t) = \frac{9 * 2.6}{(1.5) - (2.6)} (e^{-2.6 * t} e^{-1.5 * t}) - 5 e^{-1.5 * t}$$

$$D(t) = \frac{23.4}{-1.1} (e^{-2.6 * t} e^{-1.5 * t}) - 5 e^{-1.5 * t}$$

$$D(t) = -21.27 (e^{-4.1 * t}) - 5 e^{-1.5 * t}$$

$$D(t) = +21.27 e^{-4.1 * t} - 5 e^{-1.5 * t}$$

$$D(t) = +21.27 e^{-4.1 * t} D(t)(-4.1) - 5 e^{-1.5 * t} D(t)(-1.5)$$

$$D(t) = +21.27 e^{-4.1 * t} (-4.1) - 5 e^{-1.5 * t} (-1.5)$$

$$D(t) = -87.207 e^{-4.1 * t} + 7.5 e^{-1.5 * t}$$

Datos c)

$$L_0 = 6$$

$$K_1 = 2.4$$

$$K_2 = 0.4$$

$$D_0 = -3$$

Ecuación resuelta con los datos.

$$D(t) = \frac{L_0 * K_1}{K_2 - K_1} (e^{-k_1 * t} e^{-k_2 * t}) - D_0 e^{-k_2 * t}$$

$$D(t) = \frac{6 * 2.4}{0.4 - 2.4} (e^{-2.4 * t} - e^{-0.4 * t}) - (-3) e^{-0.4 * t}$$

$$D(t) = \frac{3.6}{-2} (e^{-2.4 * t} - e^{-0.4 * t}) + 3 e^{-0.4 * t}$$

$$D(t) = 1.8(2.8)(3e^{-0.4 * t})$$

$$D(t) = 5.04 (3)(e^{-0.4 * t})$$

$$D(t) = 15.12 (e^{-0.4 * t})$$

$$D(t) = 15.12 * 10.874^{-0.4 * t}$$

$$D(t) = 164.41488^{-0.4 * t})$$

Datos d)

$$L_0 = -1.4$$

$$K_1 = -0.4$$

$$K_2 = 0.1$$

$$D_0 = -4.1$$

Ecuación resuelta con los datos.

$$D(t) = \frac{L_o * K_1}{K_2 - K_1} (e^{-k_1 * t} - e^{-k_2 * t}) - D_o e^{-k_2 * t}$$

$$D(t) = \frac{-1.4 * (-0.4)}{0.1 - (-0.4)} (e^{-(-0.4) * t} - e^{-0.1 * t}) - (-4.1) e^{-0.1 * t}$$

$$D(t) = \frac{0.56}{0.5} (e^{0.4 * t} - e^{-0.1 * t}) + 4.1 (e^{-0.1 * t})$$

$$D(t) = 1.12(0.5)4.1(e^{-0.1 * t})$$

$$D(t) = 2.296(e^{-0.1 * t}) \quad e = 2.718$$

$$D(t) = (2.296^1)2.718^{-0.1 * t} \quad a^m * a^n = a^{m+n}$$

$$D(t) = 6.240^{1-0.1t}$$