$$\frac{1}{36} = \frac{-18}{36} - \frac{9C}{36} + \frac{9}{36} + \frac{12C}{36} + \frac{4}{36}$$ (Find common denominator)

$$1 + 18 - 9 - 4 = 12C - 9C$$

$$6 = 3C$$

$$\boxed{C = 2}$$

$$A = -1 - \frac{2}{2} = \boxed{-2 = A}$$

$$\mathcal{L}^{-1}\left\{X(s) = \frac{-2}{s} + \frac{1}{s^2} + \frac{2}{s+1} + \frac{1}{(s+1)^2}\right\}$$

$$\boxed{x(t) = \left(-2 + t + 2e^{-t} + te^{-t}\right) u(t)}$$ (use Laplace Transform Table)