$$\therefore x^* = -2 \ (stable)$$
$$x^* = 2 \ (unstable).$$

$$\dot{x} = 4x^2 - 16.$$

$$\frac{dx}{dt} = 4x^2 - 16$$

$$\therefore x(t) = \frac{-2(1 + Ce^{16t})}{1 - Ce^{16t}}$$

$$dt = \frac{1}{4x^2 - 16} dx$$

$$C = \frac{x-2}{x+2}.$$

$$\int dt = \int \frac{1}{4x^2 - 16} dx$$

$$4t + c = \frac{1}{4} \ln\left(\frac{x-2}{x+2}\right)$$