1. Use the change of variables discussed in class and presented on page 43 of the book to solve the following Bernoulli equations. For each of these ODEs, the solution x is a function of t, $x = x(t)$.

   (a) $tx' + x = t^4x^3$

   (b) $x' + x = tx^3$

   (c) $tx' + x = tx^2$

   (d) $x' - \dfrac{x}{t} = -\dfrac{x^2}{t}$

   (e) $tx' + x = -2t^6x^4$