## Van der Pol equation

Define two new variables, such that:

The equations then become:

Which is a first order ODE, but not linear in . The question doesn’t ask us to make it linear.

## Blasius Equation

We defined three new variables, such that:

The equations then become:

## Newton’s Second Law of Motion for two body problem

So many variables ☹

We define 4 variables, such that:

The system of equations then becomes: