

## Dynamics Worksheet 5

Find a solution to each of the following differential equations.

1.  $A' = 5A$  with initial value  $A(0) = -3$ .

2.  $y' = 5yx$

3.  $y' = 1 + y$

4.  $y' = \frac{x}{x^2y^2 - 4y^2}$  with initial value  $y(0) = 1$ .

5.  $\frac{dM}{dt} = 2M(1 - M/5)$

6.  $\frac{dR}{dx} = \frac{2R+3x^4}{x}$

7.  $y'' - 2y' - 3y = 0$

8.  $y'' - 6y' + 10y = 0$