# MATH 4305- Ordinary Differential Equations II <br> Homework 0.3 - Linear Second Order Equations Due - Wednesday, September 2, 2015 

Solve each of these linear second order differential equations.

1. $y^{\prime \prime}-y^{\prime}-30 y=0$
2. $y^{\prime \prime}+y=0$
3. $y^{\prime \prime}+2 y^{\prime}+3 y=0$
4. $y^{\prime \prime}-6 y^{\prime}+9 y=0$
5. $y^{\prime \prime}-6 y=0$
6. $x^{2} y^{\prime \prime}-4 x y^{\prime}+6 y=0$
7. $x^{2} y^{\prime \prime}-3 x y^{\prime}-5 y=0$
8. $x^{2} y^{\prime \prime}-3 x y^{\prime}+4 y=0$
