

Math 112
Quiz 5
Wednesday, March 19, 2008

1. Show that

$$y = \sqrt[3]{x + C},$$

where C is a constant, is a solution of the DE $y' = \frac{1}{3y^2}$.

2. Show that

$$y = x^{-1} - 1$$

is a solution of the DE

$$x^3y'' + x^2y' - xy = x.$$

3. Find the solution of the IVP $y' = x^2y$, $y(0) = -2$.

4. Find the general solution of the DE

$$y' = 4 - y^2.$$