

## MA 262 - Quiz 3 (Lessons 5–6)

1. Find the general solution to the equation

$$5y' - y = y^{-4}.$$

2. An object of mass 1 kg starts falling through the air. The air resistance force (in Newtons) is  $-2v$  where  $v$  is the velocity of the object, the acceleration due to gravity is assumed to be  $10 \text{ m/sec}^2$ . Determine the equation of the motion of the object (i.e. the equation describing the position  $x(t)$ ).

[The initial velocity and position are both assumed to be 0.]