# Assignment B1B Graphs and Transformations I

#### Problem 1.

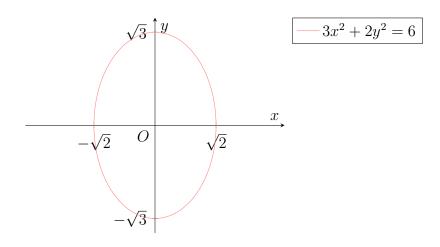
Without using a calculator, sketch the graphs of the conics in parts (a), (b) and c.

- (a)  $3x^2 + 2y^2 = 6$
- (b)  $x^2 + y^2 + 4x 2y 20 = 0$
- (c)  $4(y-1)^2 x^2 = 4$

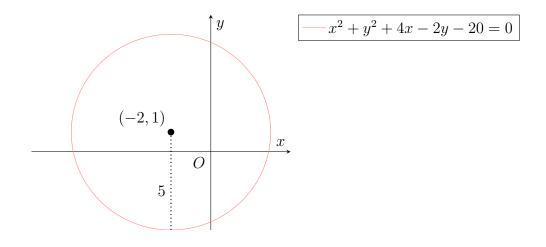
State a transformation that will transform the graph of (a) to a circle with centre (0,0) and radius  $\sqrt{3}$ .

#### Solution

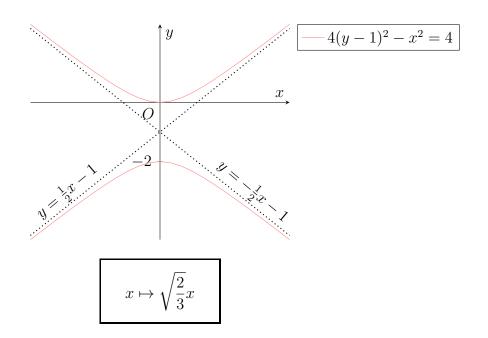
#### Part (a)



#### Part (b)



Part (c)



## Problem 2.

The curve C has paramteric equations

$$x = t^2 + 4t, y = t^3 + t^2$$

Sketch the curve for  $-2 \le t \le 1$ , stating the axial intercepts.

### Solution

