Section 1: Using parametric equations

Exercise level 1

1. Find the Cartesian equations of the curves given by
   (i) $x = 1 - t$, $y = t^2 - 4$
   (ii) $x = 2t^2$, $y = \frac{1}{t}$
   (iii) $x = 2\cos\theta + \sin\theta$, $y = \cos\theta - 2\sin\theta$

2. A curve has parametric equations $x = t^2$, $y = t^3$.
   (i) Calculate values for x and y for values of t between –3 and +3.
   (ii) Sketch the curve.
   (iii) Find the Cartesian equation of the curve.