

## Math 1AA3/1ZB3: Week 10 Tutorial Problems

March 15, 2019

1. Determine the area under the parametric curve given by  $x = 6(t - \sin t)$ ,  $y = 6(1 - \cos t)$  for  $0 \leq t \leq 2\pi$ .
2. Find the length of the curve given by the parametric equations  $x = 1 + 3t^2$ ,  $y = 4 + 2t^3$  for  $0 \leq t \leq 1$ .
3. Sketch the polar curve  $r = 2 \sin \theta$ .