MA114 Summer 2018
Worksheet 19 – Arc Length – 7/17/18

1. Find the exact length of each of the following curves.

   a) $z = y^{3/2}, 0 \leq y \leq 2$

   b) $z = \ln(1 - x^2), 0 \leq x \leq \frac{1}{2}$

   c) $w = 1 - e^{-t}, 0 \leq t \leq 2$

d) $36y^2 = (x^2 - 4)^3, 2 \leq x \leq 3, y \geq 0$

e) $z = \ln(\cos(x)), 0 \leq x \leq \pi/3$

f) $y = \dfrac{x^3}{3} + \dfrac{1}{4x}, 1 \leq x \leq 2$