**4C Revolutions with Parametrics**

1. The curve $C$ shown has parametric equations:

$$x=t\left(1+t\right),   y=\frac{1}{1+t},  t\geq 0$$

The region $R$ is bounded by the curve, the x-axis and the lines $x=0$ and $x=2$.

Find the exact volume of the solid formed when $R$ is rotated $2π$ radians about the x-axis.

