MATH 009C - Summer 2017

Quiz 1: Tuesday June 27, 2017

1. Determine if the integral is convergent or divergent:

$$\int_2^\infty \frac{1}{x \ln(x)} \, dx$$

2. Determine if the integral is convergent or divergent:

$$\int_1^\infty \frac{1}{\sqrt{x^6 + 1}} \, dx$$

Please, show all work.

2. Eliminate the parameter for the following parameterized curve. Sketch the curve and use arrows to denote the direction.

$$x = \sin(t), \quad y = \csc(t), \quad 0 < t < \frac{\pi}{2}$$

Please, show all work.