

3.

The domain is all values that u is allowed to be.

Since I can't divide by zero (division by zero isn't allowed,
I need to find all values of u that would cause division by zero.
The domain will then be all other u -values.

When is this denominator equal to zero?

$$4u^4 + 9 = 0$$

impossible, then the domain of t is $(-\infty, \infty)$ i.e. $u \in \mathbb{R}$