

2.

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

Since I can't divide by zero (division by zero isn't allowed,
I need to find all values of r that would cause division by zero.

The domain will then be all other r -values.

When is this denominator equal to zero?

$$5r^4 + 1 = 0$$

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