4.

The domain is all values that j is allowed to be.
Since I can't divide by zero (division by zero isn't allowed,
I need to find all values of j that would cause division by zero.
The domain will then be all other j-values.
When is this denominator equal to zero?

$4j^4+1=0$

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