5.

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

$5g^4+1=0$

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