

4.

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

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

When is this denominator equal to zero?

$$3d^4 + 4 = 0$$

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