3.

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

$5x^4 + 16 = 0$

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