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

Since I can't divide by zero (division by zero isn't allowed,

When is this denominator equal to zero?

I need to find all values of v that would cause division by zero. The domain will then be all other v-values.

 $v^2 - 9 = 0$

 $v=\pm 3$ then the domain of p is $\{v \mid v \neq 3 \text{ or } -3\}$