4.

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

$k^2 - 9k + 20 = 0$
k=5 or 4 then the domain of v is $\{k \mid k \neq 5 \text{ or } 4\}$