4.

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

$i^2 - 12i + 27 = 0$

$i = 3$ or 9 then the domain of p is $\{i \mid i \neq 3$ or $9\}$