3.

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

$g^2 - 16 = 0$

$g = \pm 4$ then the domain of i is $\{g \mid g \neq 4 \text{ or } -4\}$