1.

The domain is all values that u is allowed to be.
Since I can't divide by zero (division by zero isn't allowed,
I need to find all values of u that would cause division by zero.
The domain will then be all other u-values.
 When is this denominator equal to zero?
$u^2 - 4 = 0$
$u = \pm 2$ then the domain of w is $\{u \mid u \neq 2 \text{ or } -2\}$