

5.

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

Since I can't divide by zero (division by zero isn't allowed,
I need to find all values of z that would cause division by zero.

The domain will then be all other z -values.

When is this denominator equal to zero?

$$z^2 - 9 = 0$$

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