Example 1

Consider the equation: $x + y + z = x + p + z$

Is this equation true? Is it always/never/sometimes true? Explain

Solution:

Repeated occurrences of the same pronumerals represent the same value. In the case of this equation, the x on the left hand side is equal to the x on the right hand side and the z on the left hand side of the equation is equal to the z on the right hand side of the equation. We can therefore reason that the only time this equation can be true is when $y = p$.