An identity element does 'nothing'. It is a unique elemet of the set that works for every element.

The inverse of an element is another element that when the operation applied, results in the identity. The inverse is different for different numbers.

Structure		Real Numbers with Addition	Real Numbers with Multiplication
	Notation	$\langle \mathbb{R}, + \rangle$	$\langle \mathbb{R}, \cdot \rangle$
Identity	Systematic Name	additive identity	multiplicative identity
	Defining Property	does 'nothing' in addition	does 'nothing' in multiplication
	Value	0	1
Inverse	Systematic Name	additive inverse of a	multiplicative inverse of a
	Non-Systematic Name	opposite of a	reciprocal of a
	Defining Property	$a +$ (opposite of a) $= 0$	$a \cdot$ (reciprocal of a) $= 1$
	Notation	i.e. 'takes' a to the identity $-a$	i.e. 'takes' a to the identity $\frac{1}{a}$