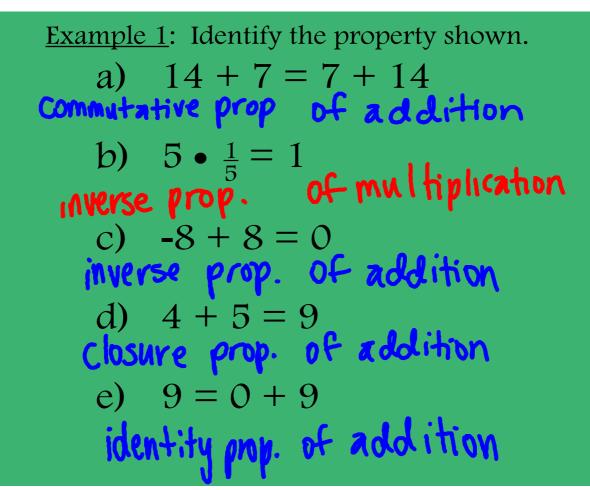
## 1.1 REAL NUMBERS & NUMBER OPERATIONS

Whole Numbers	0, 1, 2, 3
Integers	3, -2, -1, 0, 1, 2, 3
Rational Numbers	<ul> <li>Numbers that can be written in the form of a fraction</li> <li>Decimals that are repeating or terminating</li> </ul>
Irrational Numbers	<ul> <li>Numbers that are not rational</li> <li>Decimals that neither repeat nor terminate</li> </ul>

<u>PROPERTIES</u>		
	Addition	Multiplication
CLOSURE	a+b is a real number	ab is a real number
COMMUTATIVE	a+b=b+a	ab = ba
ASSOCIATIVE	(a+b)+c = a+(b+c)	(ab)c = a(bc)
IDENTITY	a+0 = a	$a \cdot 1 = a$
INVERSE	a+(-a) = 0	$a \cdot \frac{1}{a} = 1$
DISTRIBUTIVE	a(b+c) = ab + ac	



SUBTRACTION RULE: Add the opposite. Ex:  $5 - 12 \longrightarrow 5 + -12 = -7$ 

Example 2 a) What is the sum of 32 and -7? 32 + -7 = 25b) What is the difference of -5 and 8? -5 - 8 = -5 + -8 = -13c) What is the product of 9 and -4? 9 - 4 = -36d) What is the quotient of -5 and  $-\frac{1}{2}$ ?  $-5 = -\frac{1}{2} = -5 - -2 = 10$