

# Properties of Multiplication and Division

Multiplication	Division
<p><u>Identity Property</u> - The product (answer) of any number and 1 is that number.</p> $4 \times 1 = 4 \quad 36 \times 1 = 36 \quad 1 \times 253 = 253$	<p><u>Identity Property</u> - The quotient (answer) of any number and 1 is that number.</p> $4 \div 1 = 4 \quad 36 \div 1 = 36 \quad 253 \div 1 = 253$
<p><u>Zero Property</u> - The product (answer) of any number and zero is zero.</p> $2 \times 0 = 0 \quad 0 \times 40 = 0 \quad 764 \times 0 = 0$	<p><u>Zero Property</u> - The quotient (answer) of any number and zero is zero.</p> $2 \div 0 = 0 \quad 40 \div 0 = 0 \quad 764 \div 0 = 0$
<p><u>Commutative Property</u> - When you change the order of the factors the product stays the same.</p> $5 \times 6 = 30 \quad 6 \times 5 = 30$ $7 \times 8 = 56 \quad 8 \times 7 = 56$ <p>You can use turn arounds in multiplication!</p>	<p><u>One Property</u> - The quotient (answer) of any number and itself is one.</p> $3 \div 3 = 1 \quad 25 \div 25 = 1 \quad 465 \div 465 = 1$
<p><u>Distributive Property</u> - Multiplying a sum by a number is the same as multiplying each addend by the number and then adding the products (answers).</p> $6 \times 7 = (3 \times 7) + (3 \times 7) =$ $6 \times 7 = (5 \times 7) + (1 \times 7) =$ <p>You can make one of the numbers into the sum of a friendly number to multiply then add the multiplication problems!</p>	
<p><u>Associative Property</u> - You can group the factors in different ways and still get the same product (answer).</p> $2 \times (3 \times 4) = 24 \quad (2 \times 3) \times 4 = 24$	