Examples: Exponents

$2^{a+b} = 2^a \times 2^b$

2^8 -->	*can also be written as=* 2^{2+6} -->	*can also be written as=* 2^{6+2}
$= 2^8$	$= 2^2 \times 2^6$	$= 2^6 \times 2^2$
$= 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$	$= 4 \times 64$	$= 64 \times 4$
$= 4 \times 4 \times 4 \times 4$	$= 256$	$= 256$
$= 16 \times 16$	$= 256$	$= 256$
$= 256$	$= 256$	$= 256$

$2^{a \times b} = 2^{a^b} = 2^{b \times a} = 2^{b^a}$

2^8 -->	*can also be written as=* $2^{2 \times 4}$ -->	*can also be written as* $= 2^{4 \times 2}$
$= 2^8$ -->	*can also be written as=* 2^{2^4} -->	*can also be written as* $= 2^{4^2}$
$= 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$	$= 4^4$	$= 16^2$
$= 4 \times 4 \times 4 \times 4$	$= 4 \times 4 \times 4 \times 4$	$= 16 \times 16$
$= 16 \times 16$	$= 16 \times 16$	$= 16 \times 16$
$= 256$	$= 256$	$= 256$