16.1 – Laws of Exponents I

$a^m \cdot a^n = a^{m+n}$	$a^0 = 1, a \neq 0$
$(ab)^m = a^m \cdot b^m$	$(a^m)^n = a^{m \cdot n}$
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Evaluate the following.

1. $(4)^2 \cdot (4)^3 =$	2. $(3^2)^3 =$

Simplify the following.

3. $(3^2 x^2 y)^2 =$	4. $x^5 \cdot x^3 =$
5. $(2r^3 s^5)^0 =$	6. $4^y \cdot 4^6 =$

Use the laws of exponents to solve the following equation.

7. $3^x \cdot 3^2 = 3^8$