Exponent Rules

Let's use exponent rules to rewrite expressions.

9.1 Math Talk: Exponents

Find the value of each expression mentally.

- 3^2
- 12^1
- 4^{-1}
- 6^0

9.2 Exponent Expressions

1. Rewrite each expression with a single exponent.

   a. $(x^3)^4$

   b. $c^2 \cdot c^8$

   c. $\frac{r^8}{r^2}$

   d. $(2b^4)^3$

2. Find the value of each expression.

   a. $\sqrt{16}$

   b. $\sqrt{36}^2$

   c. $\sqrt{7}^2$

   d. $\sqrt[3]{11}^3$

9.3 Row Game: Exponent Rules

For each row, you and your partner will each evaluate an expression. You should each get the same answer in each row. If you disagree, work to reach an agreement.

row	Partner A	Partner B
1	2^3	$\frac{2^4}{2^1}$
2	$x^5 \cdot x^4$	$(x^3)^3$
3	$(4^2)^3$	$4^2 \cdot 4^4$
4	$\frac{y^{12}}{y^4}$	$y^5 \cdot y^3$
5	$8^2 + \sqrt{64}$	$4^3 + 2^3$
6	$4^3 + 2^3$	$\frac{r^{20}}{r^2}$
7	$\frac{8^{11}}{8^9}$	$2^4 \cdot 3^0$
8	$3v^2 \cdot 2v^5$	$6(v^7)^1$