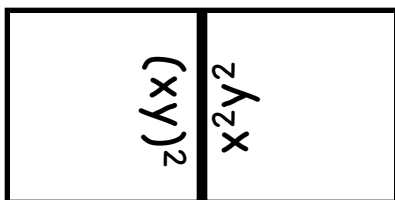


Exponent Rules Puzzle

1. Cut out the sixteen puzzle pieces

2. Pair up the matching expressions (each unsimplified expression has a matching simplified expression)

Example:



3. When complete, the puzzle will be a four-by-four square.

Good Luck!

| | | | |
|--|--|--|---|
| x^8 $\frac{4}{x^2}$ $16x^2$ $16x^4y^8$ | $64x^2$ $(2x)^5$ | $x^3 \cdot x^5$ x^{24} $(5x)^3$ $(\frac{x}{2})^3$ | $2x \cdot 3x^2$ $(x^3)^4$ $32x^5$ |
| $x^8 \cdot x^3$ $(2x^2y)^4$ $(\frac{x}{2})^2$ $6x^3$ $(x^4)^6$ | x^2 $(4x)^2$ $\frac{x^8}{x^2}$ | $8x^3$ x^{10} $125x^3$ | x^{12} $\frac{x}{8}$ $4x^2 \cdot x^2$ |
| $(\frac{2x^2}{x})^3$ $(2x^3)^4$ $(x^4)^2$ x^7 $16x^8y^4$ | $(x^5)^4$ x^{11} x^{20} | $(2x^5)^4$ x^2 $x^8 \cdot x^2$ | $4x^4$ |
| $x^3 \cdot x^4$ x^4 | $x^2 \cdot x^3 \cdot x^4$ x^6 $(8x)^2$ | $\frac{x^8}{x^4}$ x^9 $(2xy^2)^4$ | $16x^{20}$ $16x^{12}$ |

Exponent Rules

Puzzle

Answer Key

| | | | | | | | |
|---------------------------|-----------------|-----------------|-------------------|-------------------|-----------------|------------------|----------------------|
| $64x^2$ | $(2x)^5$ | $32x^5$ | $(x^3)^4$ | x^{12} | $\frac{x^3}{8}$ | $4x^2 \cdot x^2$ | $4x^4$ |
| $2(x8)^2$ | $2x \cdot 3x^2$ | $2x \cdot 3x^2$ | $(\frac{2}{x})^3$ | $(\frac{2}{x})^3$ | $(5x)^3$ | $125x^3$ | $x^2 \cdot x^8$ |
| $x^2 \cdot x^3 \cdot x^4$ | $(4x)^2$ | x^2 | $x^3 \cdot x^5$ | x^2 | $(2x^2y)^4$ | $16x^8y^4$ | $8x^3$ |
| $6x^6$ | $16x^2$ | $16x^2$ | $9(x^4)^9$ | x^{24} | $(2x^2y)^4$ | $16x^8y^4$ | $(\frac{x}{2x^2})^3$ |
| $\frac{x^8}{x^4}$ | x^8 | $7x^2$ | $x^3 \cdot x^8$ | $(\frac{x}{2})^2$ | $(2x^2y)^4$ | $16x^8y^4$ | $(2x^3)^4$ |
| $x^3 \cdot x^4$ | $2(x^4x)^2$ | $(x^5)^4$ | x^{11} | x^{20} | $(2x^5)^4$ | $16x^{20}$ | $16x^{20}$ |

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