



GRADE 6 · EXPRESSIONS & EQUATIONS · HOMEWORK

WHOLE-NUMBER EXPONENTS

Today's goal: I can write numerical expressions involving whole-number exponents in the form a^b , where a and b are non-zero whole numbers and evaluate numerical expressions involving whole-number exponents, including fractions and decimals raised to whole-number exponents.



Pick your peppers!

Everyone does Mild & Medium. Then climb as high as you can.

**Mild**

Tan the Turtle

**Medium**

Digit the Fox

**Spicy**

Blaze the Dragon

WATCH MR DJ SOLVE

Evaluate 10^4 .

1 $10 \times 10 \times 10 \times 10$.

Answer: **10,000**



REMEMBER a^b = use **a** as a factor **b** times. $10^2 = 10 \times 10 = 100$, not 20. Writing out the multiplication prevents the most common mistake.



FAMILY CORNER

No need to remember this math yourself! Ask your student to teach you Mr DJ's example, then try the first Mild problem together.

**MILD****Tan the Turtle:** Slow and steady. Warm up!

1 Evaluate 6^2 .

Answer

2 Evaluate 2^6 .

Answer



OOPS ALERT

Careful on #1! The slip Mr DJ sees most: Answered 12 (6×2).

**MEDIUM****Digit the Fox:** Stretch your brain.

- 3 Evaluate 3^3 . Show the expansion.

Answer

- 4 Evaluate $(\frac{3}{4})^2$.

Answer

- 5 Evaluate 0.5^3 .

Answer

**SPICY****Blaze the Dragon:** Bring the heat!

- 6 Compare 4^2 and 2^4 . Evaluate both. Does swapping the base and exponent always change the value?

Answer

- 7 Write $5 \times 5 \times 5 \times 5$ using an exponent, then evaluate it.

Answer



How did this sheet feel?

☐ Easy for me ☐ Just right ☐ Made me think

Stuck? Watch Mr DJ explain it

“Order of Operations with Exponents | PEMDAS in Under 2 Minutes” on YouTube: youtube.com/@MathWithMrDJ

Brain break: daily puzzles

Three new math puzzles every day, free:
puzzles.mathwithmrdj.com