



GRADE 6 · EXPRESSIONS & EQUATIONS · HOMEWORK

EXPANDING & FACTORING EXPRESSIONS

Today's goal: I can apply the distributive property to expand simple expressions and apply the distributive property to factor simple expressions.



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

Expand $4(3x + 2)$.

1 $4 \cdot 3x = 12x$

2 $4 \cdot 2 = 8$.

Answer: $12x + 8$



REMEMBER **Expand:** the outside number multiplies EVERY term inside — $7(x + 2) = 7x + 14$. **Factor:** pull out the GCF and divide every term — $22x + 33 \rightarrow \text{GCF } 11 \rightarrow 11(2x + 3)$. Always multiply back to check.



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 Expand $5(x + 3)$.

Answer

2 Expand $3(x + 8)$.

Answer

**OOPS ALERT**

Careful on #1! Blaze spotted the slip Mr DJ sees most: Answered $5x + 3$.

**MEDIUM**

Digit the Fox: Stretch your brain.

- 3 Expand $9(x + 1)$.

Answer

- 4 Factor $9x + 15$ using the GCF.

Answer

- 5 Factor $14x + 21$ using the GCF.

Answer

**SPICY**

Blaze the Dragon: Bring the heat!

- 6 Factor $20x + 30$, then check by expanding it back.

Answer

7 Dani factors $18x + 27$ as $3(6x + 9)$. Is her equation true? Is it fully factored? Explain.

Answer



How did this sheet feel?

☐

Easy for me

☐

Just right

☐

Made me think

Stuck? Watch Mr DJ explain it

Step-by-step video lessons on YouTube: [youtube.com/@MathWithMrDJ](https://www.youtube.com/@MathWithMrDJ)

Brain break: daily puzzles

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