



GRADE 7 · EXPRESSIONS & EQUATIONS · HOMEWORK

FACTORIZING & EXPANDING LINEAR EXPRESSIONS



Today's goal: I can expand linear expressions with rational coefficients and factor linear expressions with rational coefficients.

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 $7(x - 3)$.

1 $7 \times x = 7x$

2 $7 \times (-3) = -21$.

Answer: $7x - 21$



REMEMBER

Expanding: the outside number multiplies EVERY term inside. Factoring: pull out the GREATEST common factor, then check the bracket has none left. Expanding your factored answer takes you back to the start.



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 $6(2x + 5)$.

Answer:



OOPS ALERT

Careful on #1! Blaze spotted the slip Mr DJ sees most: Answered $12x + 5$.



MEDIUM

Digit the Fox: Stretch your brain.

2 Expand $-4(3x + 1)$.

Answer

3 Expand $-4(3x - 1)$.

Answer

4 Expand $\frac{1}{3}(9x - 6)$.

Answer

5 Factor $24x + 36$ completely.

Answer

6 Factor $14x - 21$ completely.

Answer



SPICY

Blaze the Dragon: Bring the heat!

- 7 Expand your answer to question 5 to check it. Explain what this check does and does not prove.

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