



MATH WITH MR DJ

GRADE 6 · EXPRESSIONS & EQUATIONS

COMBINING LIKE TERMS

Today's goal: I can apply the commutative property to generate one or more equivalent expressions, including combining and separating like terms and apply the associative property to generate one or more equivalent expressions, including combining and separating like terms.



Tan



Digit



Blaze



Pi



WARM-UP

Turn & talk · 1 min

Does $3x + 2$ equal $5x$?

1 Decide before we check.

TURN & TALK

yes or no?



Like terms share the **SAME** variable part

- 1 $3x$ and $5x \rightarrow$ like. Both count x 's.
- 2 $3x$ and $2 \rightarrow$ NOT like. One counts x 's, one counts units.

REMEMBER

3 apples + 2 oranges is not 5 apples.



BIG IDEA 2

$3x + 2$ stays as it is

1 Test at $x = 4$: $3(4) + 2 = 14$

2 But $5x = 5(4) = 20$. Not equal.

REMEMBER

Simplest form can still have two terms.



BIG IDEA 3

The invisible 1

1 x means **$1x$** .

2 $x + 4x = 1x + 4x = \mathbf{5x}$, not $4x$.

REMEMBER

A lone variable is never nothing.



BIG IDEA 4

Expand before you combine

1 $2(x + 3) + 4x$

2 $\rightarrow 2x + 6 + 4x$

3 $\rightarrow 6x + 6$

REMEMBER

Clear the parentheses first, then group.



SPOT THE SLIP!

Turn & talk

Something went wrong here...

THE PROBLEM

Simplify $n + 7n$.

WHAT A STUDENT DID

Answered $7n$ — ignored the lone n .

YOUR MISSION

What went wrong? What's the right answer?



WATCH MR DJ SOLVE

Copy the steps

Simplify $n + 7n$.

1 n is $1n$, so $1 + 7 = 8$.

Answer: $8n$



Pick your pepper!



MILD

Simplify $4a + 6a$.

#1 on your practice sheet



MEDIUM

Simplify $5x + 3 + 2x$.

#3 on your practice sheet



SPICY

Can $4x + 9$ be simplified further? Explain your answer.

#6 on your practice sheet

How's it going?



3 • Got it!

I could teach it



2 • Almost

One more example, please



1 • Not yet

I need some help



MATH WITH MR DJ

NOW YOU!

Practice sheet: everyone does Mild & Medium, then climb the peppers.

Stuck? Look back at Mr DJ's example at the top of the sheet.

Need it again? Watch "Combining Like Terms - Watch me solve this in under 2 minutes - then you try one!" on YouTube @MathWithMrDJ

Brain break: 3 new daily puzzles at puzzles.mathwithmrdj.com

