LESSON MAKER PRO

Expression Remix

Use properties and like terms to simplify linear expressions.

GRADE 7 · 7.PFA.2.c

7.PFA.2.c "Simplify and generate equivalent algebraic expressions in one variable by applying the order of operations and properties of real numbers. Expressions may require combining like terms to simplify..."

NAME _____ DATE _____

BUILD A SIMPLER EXPRESSION

Follow the order of operations first, including parentheses. Use the distributive property when needed, then combine terms with the same variable part and combine constants.

WORKED EXAMPLE

Simplify: (13x + 11) - (12x - 14)

1. Distribute the subtraction: 13x + 11 - 12x + 14
2. Combine x-terms: x + 11 + 14
3. Combine constants: x + 25

Answer: x + 25

PRACTICE 6 problems

1 Simplify: 6x + 4x - 9

ANSWER _____

2 Simplify: -6x + 1 - 4x + 7

ANSWER _____

3 Simplify: 9 - (x - 6) + 4x

ANSWER _____

4 Simplify: (1/4)x + (7/4)x - 6

ANSWER _____

5 Simplify: -2(x - 4) + 7x

ANSWER _____

6 Simplify: (5/6)x - 1/3 + (1/6)x + 2/3

ANSWER _____

APPLY IT Show your work

1 A player earns 4x coins by completing quests. They spend 7 coins on an item, earn 3x coins in a bonus round, then find 6 coins. Write and simplify an expression for the player's total coin change.

WORK SPACE

ANSWER _____

2 For a school dance, x friends each buy a $6 wristband. The student council spends $2 per friend on snacks and receives a $9 donation. Write and simplify an expression for the council's net money.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Simplify: -2(3x - 4) + (1/2)(6x + 8) - 5x

WORK SPACE AND ANSWER

ANSWER KEY

Expression Remix

GRADE 7 · 7.PFA.2.c

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Simplify: 6x + 4x - 9	**10x - 9**
2	Simplify: -6x + 1 - 4x + 7	**-10x + 8**
3	Simplify: 9 - (x - 6) + 4x	**3x + 15**
4	Simplify: (1/4)x + (7/4)x - 6	**2x - 6**
5	Simplify: -2(x - 4) + 7x	**5x + 8**
6	Simplify: (5/6)x - 1/3 + (1/6)x + 2/3	**x + 1/3**

PART 2 · APPLY IT

1. **7x - 1** Write 4x - 7 + 3x + 6. Combine the x-terms and constants to get 7x - 1.
2. **4x + 9** Write 6x - 2x + 9. Combine like terms to get 4x + 9.

CHALLENGE

-8x + 12

Accept equivalent simplified forms with terms in a different order, such as -1 + 7x for 7x - 1. Students should distribute to every term inside parentheses before combining like terms.