

Expression Remix

Use properties to rewrite expressions in simpler forms.

GRADE 7 • 7.EE.A.1

CCSS.Math.Content.7.EE.A.1 "Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients."

NAME _____

DATE _____

USE PROPERTIES

Use the distributive property to multiply every term inside parentheses by the number outside. Combine only like terms, and factor by taking out a greatest common factor.

WORKED EXAMPLE

Simplify: $(\frac{7}{8})(16y + 24)$

1. Distribute: $(\frac{7}{8})(16y) + (\frac{7}{8})(24)$

2. Multiply the coefficients: $14y + 21$

Answer: $14y + 21$

PRACTICE 6 problems

1 Simplify: $3x + 5 - 2x + 9$

ANSWER _____

2 Expand: $-4(3a - 5)$

ANSWER _____

3 Factor: $6m + 15$

ANSWER _____

4 Simplify: $(\frac{2}{3})n - (\frac{1}{4})n + 6$

ANSWER _____

5 Expand: $(\frac{3}{5})(10p - 25)$

ANSWER _____

6 Simplify: $4(2q - 3) + 5q$

ANSWER _____

APPLY IT Show your work

- 1** A bracelet club makes 5 display kits. Each kit contains $4b + 3$ beads, where b represents the number of bead strands in one design. The club gives away $2b$ beads for prizes. Write and simplify an expression for the number of beads left.

WORK SPACE

ANSWER _____

- 2** At a gaming tournament, a player completes p puzzle tiles in each of 4 rounds. In each round, the player earns $(3/4)p + 2$ points. After the tournament, the player loses 5 points. Write and simplify an expression for the player's final score.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Simplify: $(5/6)(6r - 12) - (1/3)(9r + 3)$

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Simplify: $3x + 5 - 2x + 9$	$x + 14$
2	Expand: $-4(3a - 5)$	$-12a + 20$
3	Factor: $6m + 15$	$3(2m + 5)$
4	Simplify: $(\frac{2}{3})n - (\frac{1}{4})n + 6$	$(\frac{5}{12})n + 6$
5	Expand: $(\frac{3}{5})(10p - 25)$	$6p - 15$
6	Simplify: $4(2q - 3) + 5q$	$13q - 12$

PART 2 • APPLY IT

1. **$18b + 15$** Write $5(4b + 3) - 2b$. Distribute 5, then combine $20b$ and $-2b$.
2. **$3p + 3$** Write $4(\frac{3}{4}p + 2) - 5$. Distribute 4 and combine the constant terms.

CHALLENGE

 $2r - 11$

Accept equivalent expressions with terms in a different order. For the factoring item, accept equivalent forms that factor out the greatest common factor of 3.