

Algebra I
Notes 3.4 Subtracting Expressions

Objectives: Subtract expressions by adding the opposite.
Use tiles to model expression subtraction as take away.

Review: To subtract integers, _____ the _____ of the number being subtracted.

$$5 - 2 = 5 + \underline{\quad} = \underline{\quad} \qquad 7 - (-4) = 7 + \underline{\quad} = \underline{\quad}$$

Tile Model for Expression Subtraction

1. $7x - 2x =$ 2. $7x + 5 - (4x + 3) =$ 3. $-5x + 4 - (-2x - 5) =$

Re-write the above subtraction problems as addition problems:

1. $7x - 2x =$ 2. $7x + 5 - (4x + 3) =$ 3. $-5x + 4 - (-2x - 5) =$

To subtract an expression, _____ the _____ of all terms being subtracted.

Write the opposite of each expression.

1. $4x$ _____ 2. $-100y$ _____ 3. $3x + 9$ _____

4. $-2x + 8z$ _____ 5. $9x - y$ _____ 6. $-b - c$ _____

Write a subtraction problem then solve. Let $p =$ a whole pizza.

Elmo ordered 10 pizzas. His guests ate 4 of the pizzas. Elmo ate 3 slices of pizza.
How much pizza was left?

Write a subtraction problem then solve. Let c = a whole case of pop.

Big Bird bought 7 cases of pop. His Sesame Street friends drank 3 cases and 5 cans. How much pop was left?

Write a subtraction problem then solve. Let b = a whole box of cookies.

Bert had 4 boxes of cookies but 5 of the cookies were missing. Ernie took 2 full boxes of cookies and returned the 5 missing cookies. How many cookies were left?

Subtract then simplify.

1. $(8a - 9) - (3a - 7) =$

2. $(6n + 5) - (10n + 8) =$

3. $(6x - 7) - (3x - 5) =$

4. $(2x - 3) - (-5x - 6) =$

5. $(3a - 5b + c) - (7a - 2b - 3c) =$

6. $(2x + 3y) - (5y - 3z) =$

7. $(2z + 4) - (3y + 7) + (5x + 2y) =$

8. $(8a + 7b) - (10b + 7) - 3b =$

9. $7x - (3x - 8) + 12x - (5x + 6) =$

10. $(3x - 4) - (-2x + 7) - (-9x + 9) =$