Unit 8, Lesson 7

Integers of Quadratics

Let's explore operations with integers.

7.1 Math Talk: Missing Values

Mentally solve each equation for a.

- $7 \cdot a = 49$
- $7 \cdot a = -49$
- $-7 \cdot a = 49$
- $-7 \cdot a = -49x$

7.2 Finding Pairs That Work

For each question, find a pair of integers with the given product and sum.

1. product: 6, sum: 5
2. product: 6, sum: 7
3. product: 4, sum: -5
4. product: -1, sum: 0
5. product: -6, sum: 1
6. product: -12, sum: -1
7. product: -12, sum: 4

7.3 Factor Expansion

For each question:

- Rewrite the expression in standard form.
- Compare your question and solution with your partner.
- Be prepared to explain anything you notice in the comparison.

Partner A:

1. $(x-1)(x-2)$
2. $(x-1)(x+2)$
3. $(x+4)(x-4)$
4. $(x+3)(x-6)$
5. $(x-2)(x-3)$
6. $(x-2)(x+7)$
7. $(x+5)(x-2)$
8. $(4-x)(1-x)$

Partner B:

1. $(x+1)(x+2)$
2. $(x+1)(x-2)$
3. $(x-4)(x+4)$
4. $(x-3)(x+6)$
5. $(2-x)(x-3)$
6. $(x+7)(x-2)$
7. $(x-5)(x+2)$
8. $(x-4)(x-1)$