## Lesson 7: Integers of Quadratics

* Let’s explore operations with integers

### 7.1: Math Talk: Missing Values

Mentally solve each equation for $a$.

$7⋅a=49$

$7⋅a=-49$

$-7⋅a=49$

$-7⋅a=-49x$

### 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. $\left(x−1\right)\left(x−2\right)$
2. $\left(x−1\right)\left(x+2\right)$
3. $\left(x+4\right)\left(x−4\right)$
4. $\left(x+3\right)\left(x−6\right)$
5. $\left(x−2\right)\left(x−3\right)$
6. $\left(x−2\right)\left(x+7\right)$
7. $\left(x+5\right)\left(x−2\right)$
8. $\left(4−x\right)\left(1−x\right)$

Partner B:

1. $\left(x+1\right)\left(x+2\right)$
2. $\left(x+1\right)\left(x−2\right)$
3. $\left(x−4\right)\left(x+4\right)$
4. $\left(x−3\right)\left(x+6\right)$
5. $\left(2−x\right)\left(x−3\right)$
6. $\left(x+7\right)\left(x−2\right)$
7. $\left(x−5\right)\left(x+2\right)$
8. $\left(x−4\right)\left(x−1\right)$



© CC BY 2019 by Illustrative Mathematics®