



7-6 Mathematical Literacy and Vocabulary

Factoring $ax^2 + bx + c$

Austin is trying to factor $x^2 + 5x + 4$. He wrote these steps to solve the problem on note cards, but they got mixed up.

Find factors of ac that have the sum of b .

Since $ac = 4$ and $b = 5$, find positive factors of 4 that have a sum of 5.

$$(x + 1)(x + 4)$$

To factor the trinomial, use the factors you found to rewrite bx as $1x + 4x$.

List the factors of 4:

2, 2 1, 4

Sum of the factors:

4 5 ✓

Use the note cards to complete the steps below.

1. First, _____

2. Second, _____

3. Third, _____

4. Then, _____

5. Finally, _____



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1. First, **find factors of ac that have the sum of b .**

2. Second, **since $ac = 4$ and $b = 5$, find positive factors of 4 that have a sum of 5.**

3. Third, **list the factors of 4: 2, 2 1, 4**

Sum of the factors: 4 5 ✓

4. Then, **to factor the trinomial, use the factors you found to rewrite bx as $1x + 4x$.**

5. Finally, **$(x + 1)(x + 4)$**
