Lesson 11: Completing the Square

Classwork

Opening Exercise

Rewrite the following perfect square quadratic expressions in standard form. Describe patterns in the coefficients for the factored form, , and the standard form, .

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| --- | --- | --- | --- |
| FACTORED FORM | WRITE THE FACTORS | DISTRIBUTE | STANDARD FORM |
| Example: |  |  |  |
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**Example**

Now try working backward. Rewrite the following standard form quadratic expressions as perfect squares.

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| **STANDARD FORM** | **FACTORED FORM** |
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**Exploratory Challenge**

Find an expression equivalent to that includes a perfect square binomial.

Exercises

Rewrite each expression by completing the square.

Lesson Summary

Just as factoring a quadratic expression can be useful for solving a quadratic equation, completing the square also provides a form that facilitates solving a quadratic equation.

Problem Set

Rewrite each expression by completing the square.

1. Which of these expressions would be most easily rewritten by factoring? Justify your answer.