## Unit 3 Lesson 17: Completing the Square and Complex Solutions

### 1 Creating Quadratic Equations (Warm up)

#### Student Task Statement

Match each equation in standard form to its factored form and its solutions.

* ,
* 5, -5
* , ​​​​

### 2 Sometimes the Solutions Aren't Real Numbers

#### Student Task Statement

What are the solutions to these equations?

### 3 Finding Complex Solutions

#### Student Task Statement

Solve these equations by completing the square.

### 4 Can You See the Solutions on a Graph? (Optional)

#### Student Task Statement

1. How many real solutions does each equation have? How many non-real solutions?
2. How do the graphs of these functions help us answer the previous question?



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