## Unit 6 Lesson 6: Completing the Square

### 1 Fill in the Box (Warm up)

#### Student Task Statement

For each expression, what value would need to be in the box in order for the expression to be a perfect square trinomial?

### 2 Complete the Process

#### Student Task Statement

Here is the equation of a circle:

Elena wants to find the center and radius of the circle. Here is what she’s done so far.

Step 1:

Step 2:

Step 3:

1. What did Elena do in the first step?
2. Why did Elena add 9 and 100 to the *left* side of the equation in Step 2?
3. Why did Elena add 9 and 100 to the *right* side of the equation in Step 2?
4. What should Elena do next?
5. What are the center and radius of this circle?
6. Draw a graph of the circle.

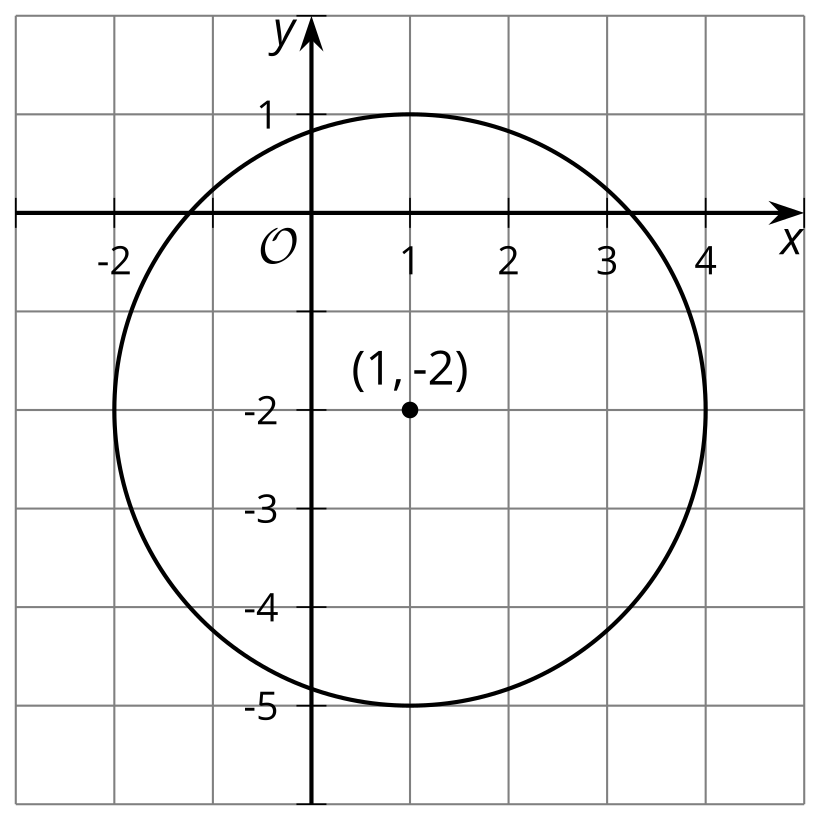
### 3 Your Turn

#### Student Task Statement

Here is the equation of a circle:

1. Find the center and radius of the circle. Explain or show your reasoning.
2. Draw a graph of the circle.

#### Activity Synthesis





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