

## Lesson 8 Teaching Portal Materials

### Episode Supports

#### Episode 7: Reflecting

#### Episode Description

Keoni and Sasha examine a table with the equations they have explored so far. They use the table to predict an equation for a parabola with a vertex that they choose.

#### Students' Conceptual Challenges

None

#### Focus Questions

For use in a classroom, pause the video and ask these questions:

1. [Pause the video at [0:47](#)]. Where would the parabola be on the coordinate grid when  $h$  is 9 and  $k$  is 13?
2. [Pause the video at [0:52](#)]. Predict the equation for this parabola.

#### Supporting Dialogue

Provide opportunities to for students to revoice a mathematical proposition. Ask a few students to revoice the propositions of this episode:

- Revoice Keoni and Sasha's idea of what will happen to the equations if the  $p$ -value changes.
- Revoice Sasha's explanation of how they arrived at their equation for the parabola.

#### Math Extensions

1. Take a moment to use the methods from this episode to derive the equation of a parabola with a vertex at  $(9, 13)$  and a  $p$ -value of 3.
2. Where do you see the  $(x - 9)$  term in the diagram that you drew to derive the equation? Where is the  $+13$ ?

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