

Background content: Prior to doing this activity, students should have working knowledge of the following:

- Rewrite logarithmic functions in exponential form and exponential functions in logarithmic form
- Basic features of logarithmic and exponential functions

Philosophy behind this activity:

This activity allows students to see how logarithms and exponential functions are related through a graphical approach.

Learning Goals:

1. Rewrite a logarithmic function into exponential form
2. Rewrite an exponential function into logarithmic form
3. Understand features of graphed log/exponential functions
4. Connect how logarithms and exponential functions are inverses of one another

Implementation Notes:

1. Prior to the activity, I would suggest reviewing rewriting logarithms and exponentials and domain/range of these types of functions.
2. Depending on how comfortable students are with the review, you can break the cards into rounds or give them all out to a group of students.
3. The cards match together in groups of four (already matched on the activity), and there is NO set pattern to how they match. Students must find how all four cards relate to one another (function & its graph, inverse function & its graph, function & its intercepts, inverse function & its intercepts). This has made the activity more difficult for students as they cannot just simply find two graphs and two functions and match them together.
4. After each group has completed the activity, I have had a class discussion around what made it easy/difficult and how they knew which cards matched together.