

Ten Second Exponential Graphs Activity

Description

Students are asked to make 10-second sketches of exponential graphs from standard form. Add vertical shifts if that is appropriate for your class.

Prep Work

Print sets of equations to project using document camera.

Instructions

○ Pre Activity

None

○ Activity

- Have the students take out a piece of paper and put six axes on the paper and number them. There should be not tick marks on the axes.
- Write six exponential equations on the board or on the document camera using different types of numbers (small, large, fractions, positive, negative). Add vertical shifts if that is appropriate for your class.
- Student get a couple minutes to draw quick sketches of the graphs where all that matters is the vertical intercept is in the correct location, and the exponential is going in the correct direction facing up or down.
- Have students trade papers to grade.
- Ask for 6 volunteers to come to the board or document camera and draw one of the exponentials. Go over them with the class to determine why the graph drawn is correct or how to fix it if it is wrong.
- **When students exchange and grade neighbor's papers, have them write the equation on paper next to 10-second graph for a reference by students of correct form.**
- If you want to extend this activity, you can ask students to give the domain and range of each function as well as the equation for the horizontal asymptote.

○ Post Activity

Small discussion of the characteristics of exponentials.

Time Required

15 minutes
