Graphing Exponential Functions
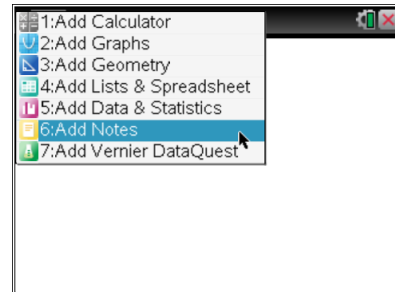## Create Activity

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Activity Overview:

In this activity, you will construct a minimized slider in the Graphs application to explore the function **f**(x) = b^x for $0 \leq b \leq 4$.
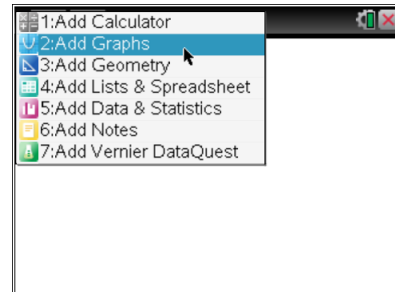

Steps

Step 1: Creating a title page

1. Press 🏠 on and choose New Doc. Select Add Notes.

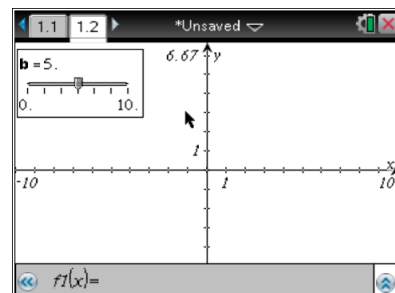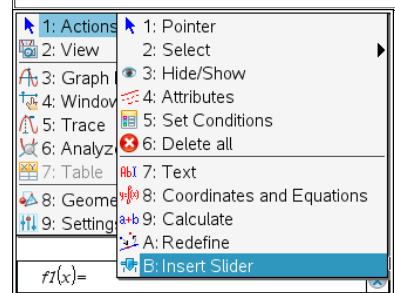2. Create the title page by typing *Graphing Exponential Functions*.

Step 2: Inserting a Graphs page

1. Press ctrl Ⅰ or ctrl doc▾ to insert a new page. Select Add Graphs.

Step 3: Inserting a slider

1. Press menu and select **Actions > Insert Slider.**

2. Use your Touchpad to place the slider in the top left of the screen, press enter, then press **B** and then press enter.

Step 4: Changing the slider settings

1. With the cursor over the slider box, press [ctrl] [menu] for the context menu.

2. Select **Settings.** Press [tab] to move through the Slider Settings fields. Change the settings to:

   Value: 2, Minimum: 0, Maximum: 4, Step Size: 0.25,

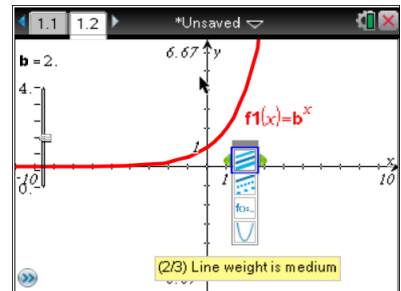   Style: Vertical, and Display Digits: Float 3.

3. When finished, press [enter].
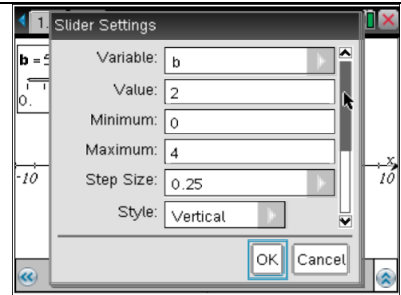
Step 5: Entering the function

1. Press [ctrl] [G] to display the entry line (if hidden)
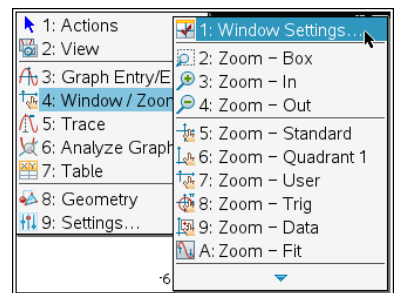
2. Type [B] [^] [X].

3. Press [enter].
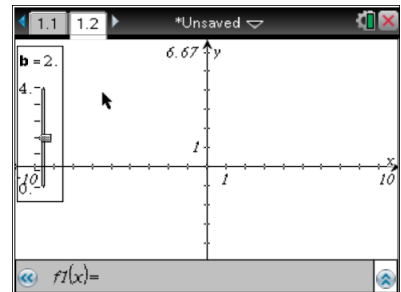
4. Move the cursor over the graph of the function and press [ctrl] [menu]. Select Attributes.

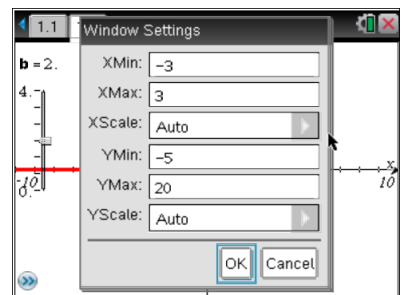5. Arrow to the right to select Line weight is medium.

6. Press [enter].

Step 6: Adjusting the window

1. Press [menu] and select **Window/Zoom > Window Settings.**

2. Move through the fields by pressing [tab]. Change the values to:

   XMin: –3, XMax: 3, XScale: Auto, YMin: –5, YMax: 20, and

   YScale:Auto.

3. When finished, press [enter].

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Step 7: Labeling points

1. Press **Menu > Geometry > Points & Lines > Point On.**
2. Move to the graph and press [enter] to select the graph and then again to place the point. Press [esc]. To move to the point (0, 1), double-click on the *x*-value, enter 0, and then the point will move.
3. Move the cursor to the point and press [ctrl] [menu]. Select Attributes.
4. Arrow to the right to select Large.
5. Press [enter].
6. Repeat and place another point on the graph. Double-click on the *x*-value, enter 1, and then the point will move to (1, *b*).
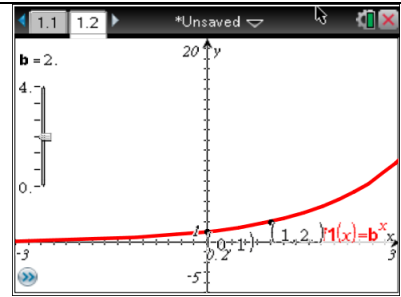
Step 8: Changing the value of *b*

1. Move the cursor over the slider controller. Press [ctrl] [🖱] to close the hand and grab the slider controller.
2. Use the Touchpad to move the slider controller and change the value of *b*.
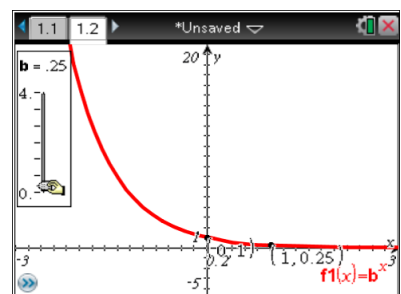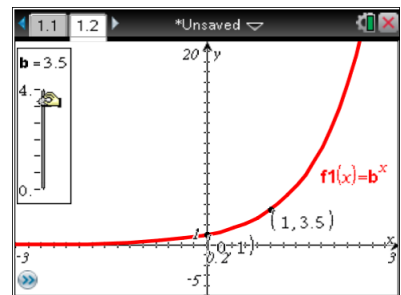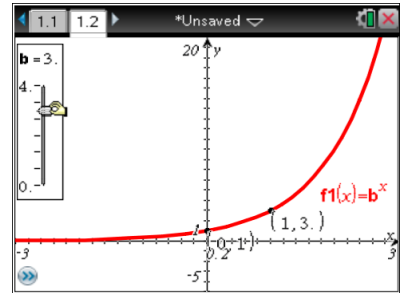
Step 9: Saving the document

1. If desired, save the document. Press [ctrl] [S] or [ctrl] [🖩] to open the Save As dialog box. Enter a name and select a folder in which to save the document. Press [enter].

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