



Amazing Fetal Growth

Student Activity

Name _____

Class _____

Introduction

How fast does a human fetus grow? The data below are the average masses, at various stages of development, of a human fetus.

Weeks of development	Fetal mass in grams
12	28
16	88
20	256
24	510
28	907
36	2,665
40	3,204

Objectives

In this activity, you will:

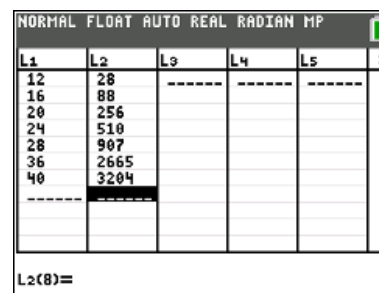
- graph data of human fetal growth
- describe the rate of human fetal growth

You'll Need

- TI-84 Plus CE, with SCI TOOLS App

Entering the Data

1. Turn on your calculator. Press **[stat]**, **[enter]** to go to the **List Editor**.
2. Clear any data from the **List Editor** by using the arrow keys to move the cursor to the top of each column and pressing **[clear]**, **[enter]**
3. Enter the data for weeks of development, from the first column in the table, into list **L1**. To do this, move the cursor to the first row of the column (this will be indicated at the bottom of the screen by "**L1(1)=**"). Then enter the number **12**. Press **[enter]** to move the cursor to the next row, and enter the number **16**. Continue this process for the rest of the numbers in the column.
4. Use the same process to enter the data for fetal mass, from the second column in the table, into **L2**.
5. Now, you will graph your data.



Press **[apps]** and scroll to **SCI TOOLS**. Press **[ENTER]**, and **[3]** to get to the Data/Graphs wizard.

Press **[WINDOW]** to select **PLOT DATA**

Press **[WINDOW]** to select **LINE GRAPH**.



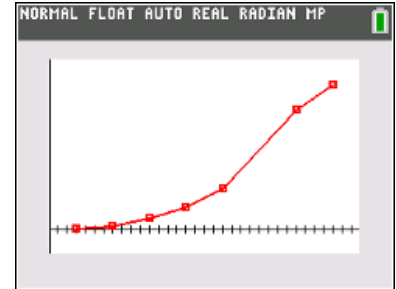
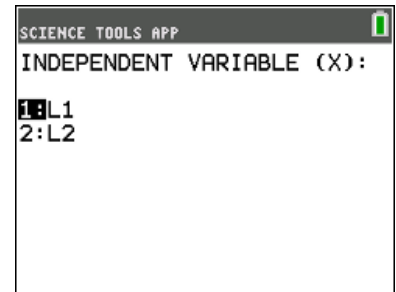
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6. Highlight **L1** and press **ENTER**. This identifies your independent variable as weeks of development, which will appear on the x-axis.
7. Highlight **L2** and press **ENTER**. This sets fetal mass as your dependent variable, which will appear on the y-axis.



Data Analysis

1. Describe fetal growth, in terms of mass and time, as it is shown on your graph.
2. Is the mass increase linear or exponential? How do you know?
3. According to the graph, what would be the mass of a baby born at 38 weeks? At 26 weeks?
4. If the mass of a woman is 64 kg and she delivers a baby of average mass at 40 weeks of gestation, what percentage of the mother's mass is the baby's?