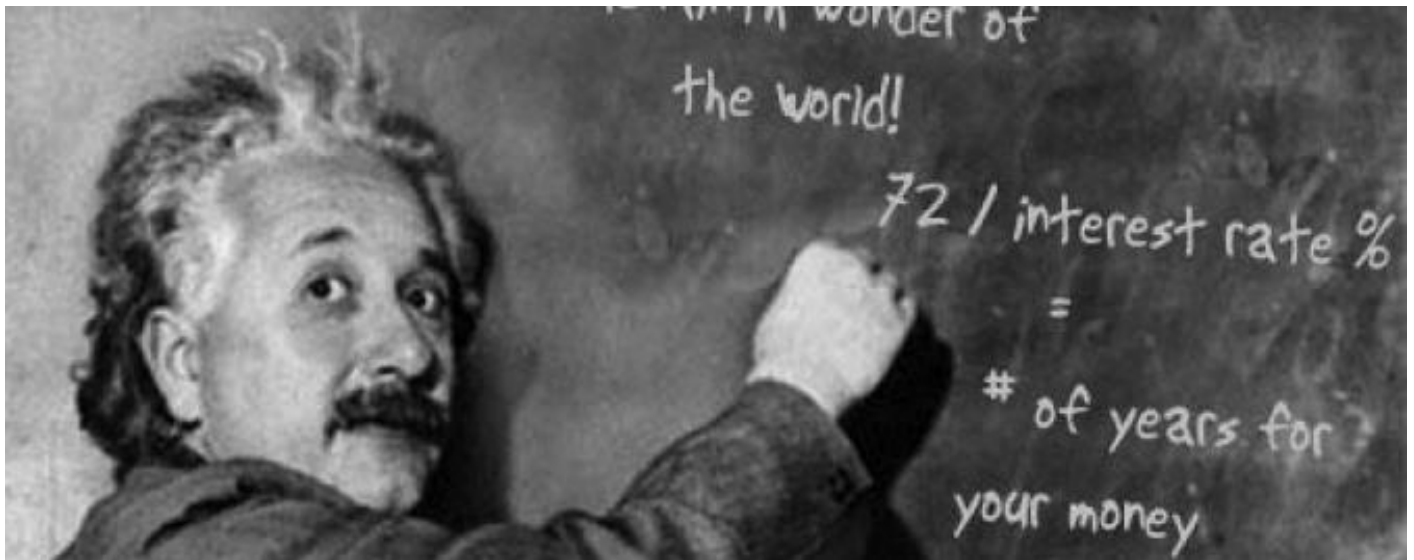


Monday 1/27/14

Hi everyone,

The answer to my puzzle challenge with the spreadsheet last week is called the Rule of 72. It says that money doubles when the interest rate times the numbers of years is approximately 72. So at 9%, it would be 8 years and at 12% it would be approximately 6 years. Picture from <https://www.saveup.com/blog/the-rule-of-72-the-power-of-compound-interest-over-time/>

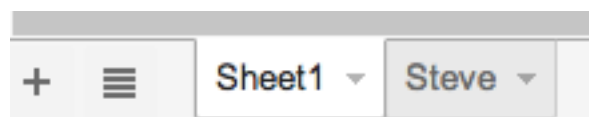


The first part of this week's lesson involves one more spreadsheet skill -- taking a rectangle of numbers and generating a graph.

I have shared a document with you called Online GD Course Jan 2014 and also given it a TINYURL. You got a notification of this document last week but you can also go to it at the URL of <http://tinyurl.com/lesson3january> and access it.

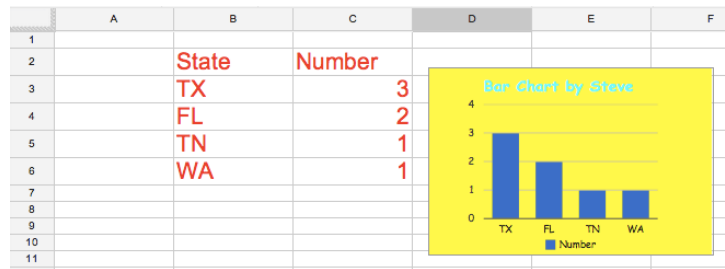
This document requires you to sign in and does not allow ANYONE TO EDIT. If you have trouble because you have two email accounts and cannot get in, let me know! It is best to sign in with your Google Drive account and then go to the tinyurl.com/lesson3january webpage.

The required video at <http://youtu.be/2KztYAXVEV8> will show the steps of what to do.

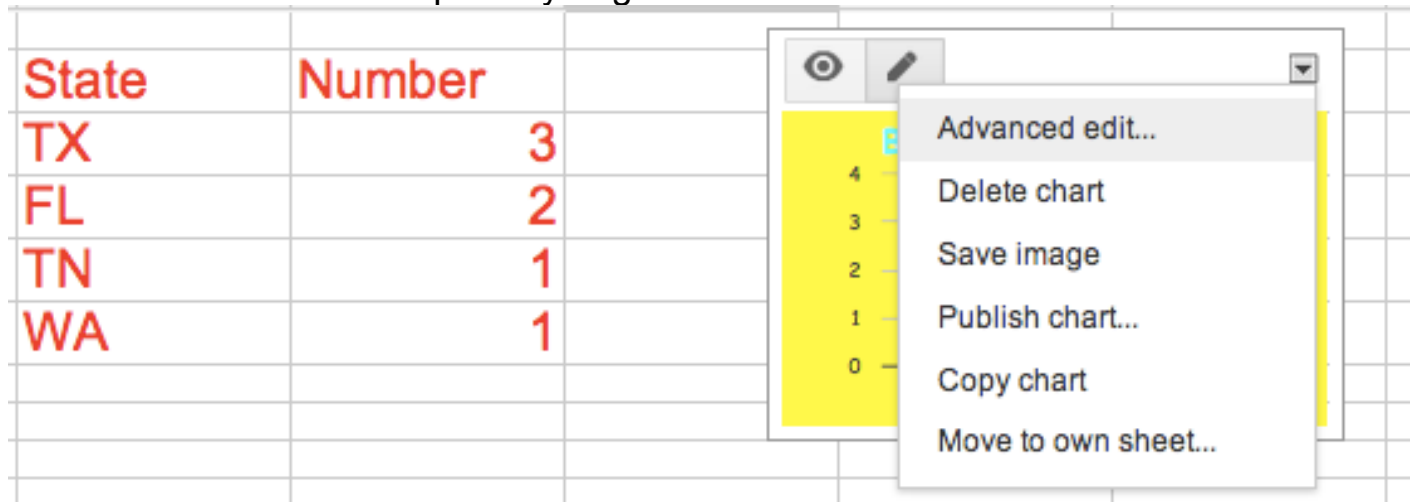


The + symbol lets you make a new TAB or new WORKSHEET and then the RENAME feature lets you give it your first name. Please create a new worksheet and then use the baby triangle next to "Sheet" to rename it with your name.

The data to graph is located on SHEET1 and so you will copy and paste the red section from sheet 1 to YOUR worksheet page. Once you highlight the data and choose INSERT CHART under the INSERT MENU, you will get something like this



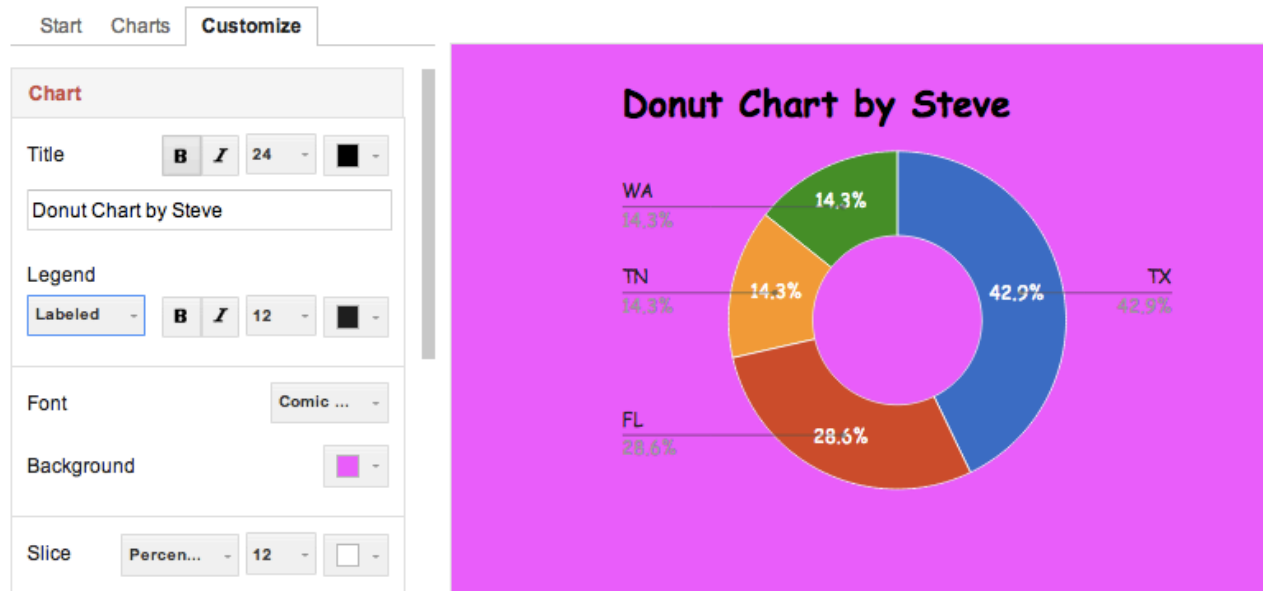
You can move the chart around by moving the mouse onto the top of the chart and getting the hand icon. You can resize by one of the bottom corners. When you click on the chart and click the pencil you get



and go into ADVANCED EDIT mode. This lets you change the type of chart or the legend or font type or colors.

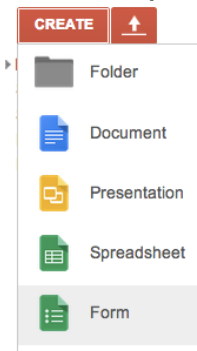
HW 3.1 -- after watching the video previously referenced, create a new worksheet in our group GD file and copy/paste from the main sheet to yours. Change the name of this new worksheet and create a chart of your choice on this sheet.

Chart Editor



The second part of our lesson for this week involves creating a form or survey using the FORM module of GD that we have ignored in previous weeks.

Notice that FORM was one of the CREATE options that we left out in the first week.



Once you create a FORM, you will be entering a series of questions to be in your survey. These can be quiz questions for students or info questions to faculty colleagues, parents or community members. The users answer your questions and the results flow into a spreadsheet on Google Drive called Responses.

Here are the two required videos I have made for you on FORMS.

Google Forms Part I (16 min) <http://youtu.be/eZeSeaTbeSw>

Google Forms Part II (8 min) http://youtu.be/XLisPLZd_Zo

The first thing you decide is the title of your FORM and what colorful template you want to use. Don't forget to choose APPLY after you choose the template.

Choose title and theme

Title

Theme: Default



You can choose from these data types for each question.

Text	Form Description		
Paragraph text	BASIC	ADVANCED	LAYOUT
Multiple choice	ABC Text	Scale	Section header
Checkboxes	Paragraph text	Grid	Page break
Choose from a list	Multiple choice	Date	Image
Scale	Checkboxes	Time	Video
Grid	Choose from a list		
Date			
Time			
	Add item ▼		

Text = short text, e.g. name

Paragraph = longer text

Multiple choice and Choose from a List require the user to choose 1 out of many

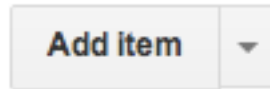
Checkboxes is unique! It allows the user to more than one out of a list of choices

Scale allows the user to choose a number from 1 to what you specify

Grid gives you a matrix of rows and columns with circles to fill in

Image and Video allow you to enhance your survey with pictures and videos.

Each time you enter a question, you choose



and you can add one more.

Each time you add a question, you will see this icon on the right



The left icon (pencil) means EDIT.

The center icon means DUPLICATE so that you can make question 7 resemble question 6 without having to retype everything for example.

The right icon means DELETE this question.

One data type is the paragraph. Anything you put into the HELP TEXT will be italicized when the user sees it.

Question Title	Please use quality English to describe the difference between a rational and ir
Help Text	Please have at least 3 sentences. Please give an example or two.
Question Type	Paragraph text ▾
Their longer answer	

Another data type is TEXT and it refers to short info, perhaps 2 or 3 words.

The * means the operator is required to enter something and cannot leave it blank.

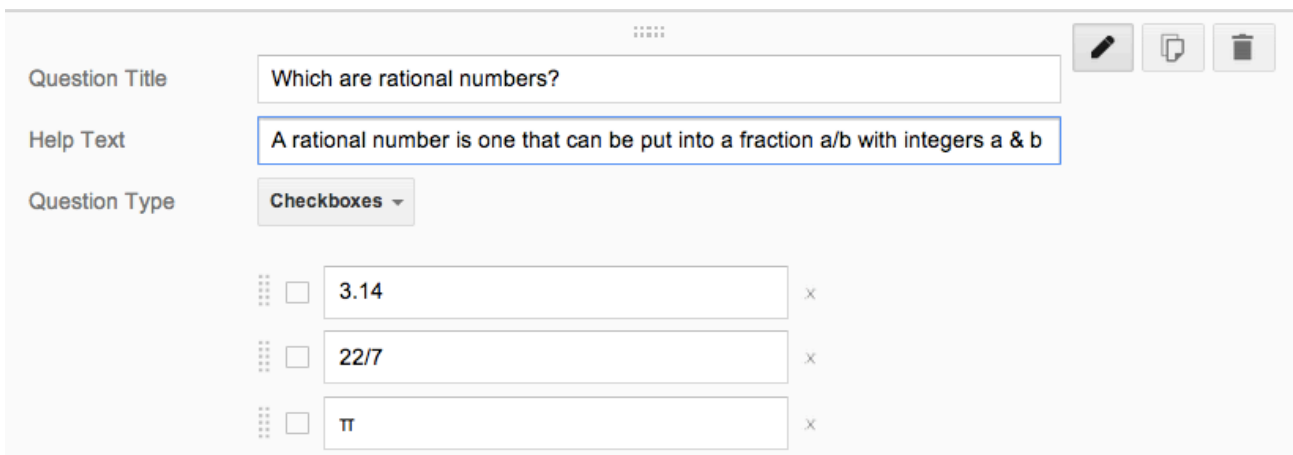
This type of action is called DATA VALIDATION since the user will get a red error message if he/she tries to leave it blank. *If you are a relative beginner, please ignore DATA VALIDATION in this PDF. If you are already experienced with FORMS, I have given you a bonus challenge at the end of this lesson.*

Fraction Survey Quiz

Form Description

What is your first name? *

This next picture shows the data type called CHECKBOX and it allows the user to specify more than one item. Below I am using it to allow the student to choose 2 of the 3 answers.



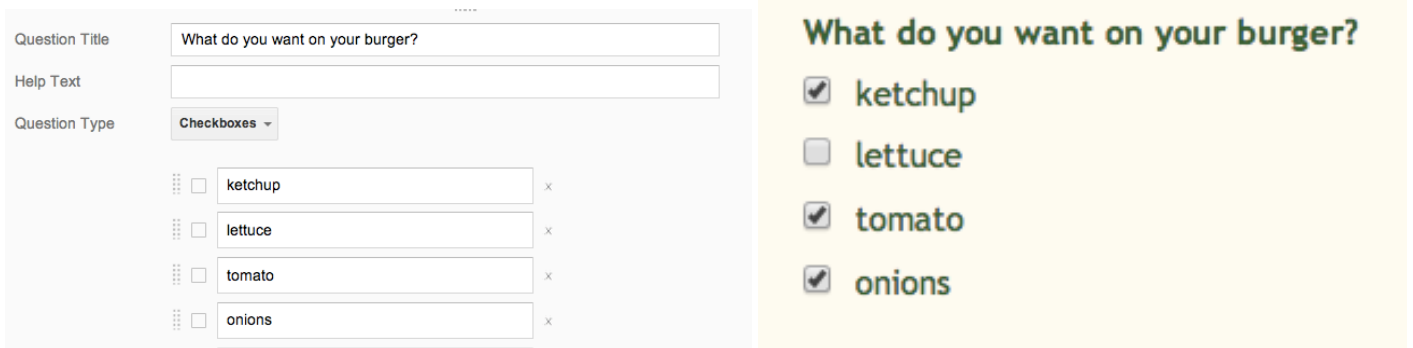
Question Title: Which are rational numbers?

Help Text: A rational number is one that can be put into a fraction a/b with integers a & b

Question Type: Checkboxes

- 3.14 x
- $22/7$ x
- π x

Here I am using it to allow the user to choice multiple items for a burger. This CHECKBOX option is the only one of the Google data types that allows the user to indicate multiple items.



Question Title: What do you want on your burger?

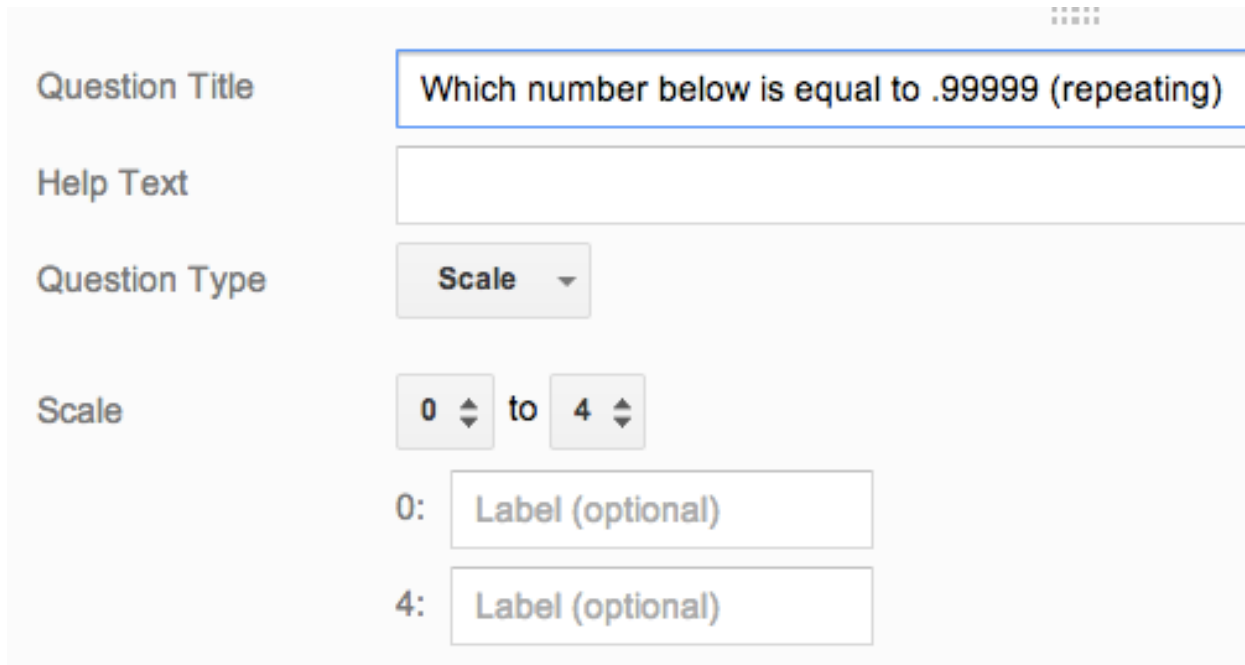
Question Type: Checkboxes

- ketchup x
- lettuce x
- tomato x
- onions x

What do you want on your burger?

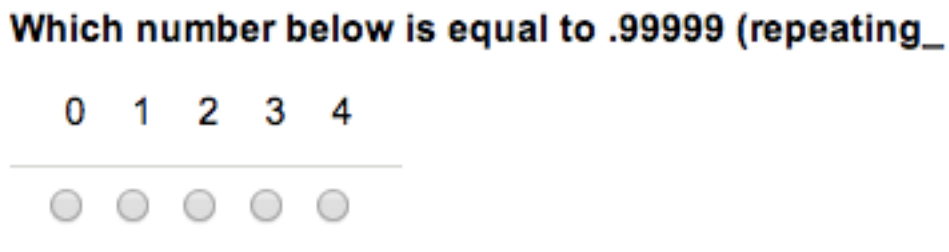
- ketchup
- lettuce
- tomato
- onions

This next picture is the SCALE type



The screenshot shows the configuration for a Scale question. The 'Question Title' field contains the text 'Which number below is equal to .99999 (repeating)'. The 'Question Type' is set to 'Scale'. The scale range is configured from 0 to 4. Below the range, there are two input fields for labels: '0: Label (optional)' and '4: Label (optional)'.

and results in



The rendered question in the form is: 'Which number below is equal to .99999 (repeating_'. Below the question, the numbers 0, 1, 2, 3, and 4 are listed. Underneath each number is a radio button for selection.

The scale can go up to 10 and not 33. How sad. Maybe the Google people will revise it to go up to 33 in their next update ;-)



The GRID type results in a clever rectangle of choices where you control the row and column headings.

Classify each number as rational or irrational *

	Rational	Irrational	Not sure
1/3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.232323	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
$\pi / 2$	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.2323 (repeating)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

One of the newest features is called DATA VALIDATION and this means you can give error messages (in red) to the user if the answer does not meet certain criteria. *Beginners: please ignore*

▼ Data validation

Regular expression ▼ Contains ▼ rational Whoops! Please use the word rational

By the way, there are now programs and add-ons that will do automatic grading of answers on a Google spreadsheet. One of them is called FLUBAROO (<http://flubaroo.com>) and one is called DOCTOPUS (many links including <http://ipadsandbox.wikispaces.com/file/view/jlGoogleDoctopus.pdf>). There is also a program called GOOBRIC that adds rubric features to Doctopus. If this topic interests you, I would love to help you individually or later in the course. The grading works by having the teacher submit a form with the correct answers and the computer then compares each student's entries with the correct answers. Obviously multiple choice and short answer questions work best.

HW 3.2: Create a FORM that has some meaningful personal, educational or professional potential real usage. Keep the bar high and try to create something useful and hopefully educationally significant Send the URL to me so that I can test your form and be one of "your customers." I will send them out to others in the class and hopefully some of you will have time in your busy week to respond to each

other. Be careful with the URL. You are not sending me the URL where you create the form. You are sending me the URL that you see when you choose VIEW LIVE FORM. This is a common mistake. If your school's domain is protected, you might see a checkbox that says "allow others outside of your domain to access this form."

If you have had experience with GD before this course, try to construct at least one question of each data type and to use as many data validation options as possible. Also try to include at least 2 pictures and 2 videos.

Have a good week,

Steve



phone = 781-953-9699
 skype name = stevebergen (no spaces)
 Email = sbergen33@gmail.com



Optional 3.3 for more advanced users only:

Using the SPLIT formula in GD: 2 min video at <http://youtu.be/hCnu0aETC-I>

Using the COUNTIF formula in GD: 3 min video at <http://youtu.be/OnLs3JLjCvQ>

Fancier features with GD Forms: 5 min video at <http://youtu.be/qXMHxxuOn1Y>

Optional 3.4 Challenge -- using the GD at <http://tinyurl.com/presidents33>, copy and paste the data into a new TAB WORKSHEET and put your name on it

I would like to see you in your individual worksheet

a) freeze the first column and the top two rows (use FREEZE under VIEW)

a) insert columns between A and B and put the names into 2/3 columns using the SPLIT command

b) demonstrate in the YELLOW the use of the =COUNTIF command to tally the number of Presidents inaugurated at under age 60 as well as the number of Presidents from one state of your choosing

Optional for our 30 minute conversation -- I will get you started with the Flubaroo journey if it seems that it is something you can use.