Organize your backpack and math binder.

***Keep review sheets for each chapter.**

***Keep copy of unit circle.**

***Keep notes for chapters 1-6.**

***Recycle old homework assignments!!**

Periodic Behaviors and Models (sunrise/sunset investigation)

Periodic Behavior and Models **NAME:** **PER:**

Using the link https://www.timeanddate.com/ (also posted in Google Classroom), complete the table below for **a location as given by your teacher**. After you have recorded the data and computed the decimal values, plot 2 sets of all 12 points in Desmos (using "month number" for the **x-axis** and "day length" for the **y-axis.** See instructions below for using a TABLE in Desmos.

******Note: choose your data from 2021 and for the 15th of each month.******

****Note: choose your data from 2021 and for the 15th of each month.****

x				y
MONTH NUMBER	SUNRISE TIME	SUNSET TIME	DAY LENGTH (# of hours and minutes of sunlight)	DECIMAL VALUE FOR **DAY LENGTH**
1 (Jan)				
2 (Feb)				
3 (Mar)				
4 (Apr)				
5 (May)				
6 (June)				
7 (July)				
8 (Aug)				
9 (Sep)				
10 (Oct)				
11 (Nov)				
12 (Dec)				
13 etc…				

Do not enter any more values into this table.
Enter 2 sets of these points into Desmos.

Plot 24 data points on your graph

LOCATION:

→ **Example for decimal value:**

10:38 = 10 hours, 38 minutes
= 10.63 hours
(round to the nearest hundredth)

After your scatterplot is completed, create two possible models:

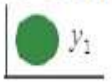
1. y =

2. y =

See Google Classroom for links!

Directions for creating a table and scatterplot in Desmos:

1. **Go to https://www.desmos.com/calculator. Create an account** so you can save your work by using an option from the upper right corner: **log in** or **sign up**. (Suggestion: use your **school Google account** to do so.)

2. Click on + toward the upper left corner and choose TABLE. Enter your points into the table. Edit color and shape of points using wheel icon then click on colored dot at top of table for options. 

3.  Click on tools icon in upper right corner to choose **RADIAN** mode, **label your axes**, then size your window: $-1 \le x \le 25$ *(step=π)* **and** $-1 \le y \le 25$ *(no step)*. **SAVE YOUR GRAPH…title it with location and your name!**

4. **Now create a model (equation) of the data** using what you know about trig functions and their graphs. *Click on box 2 in left column (below your table) to enter equation, okay to use pi, decimals, fractions.*

Use this format: **$y = A\cos k(x - b) + h$** and **$y = A\sin k(x - b) + h$** *(record equations in box provided above.)*

5.  Click on the share button in the upper right corner, copy the link, then submit it in Google Classroom (assignment listed under ch.7 in Classwork tab.) Be sure **location** is included in your Desmos title!

#1 → Chico

#2 → USA

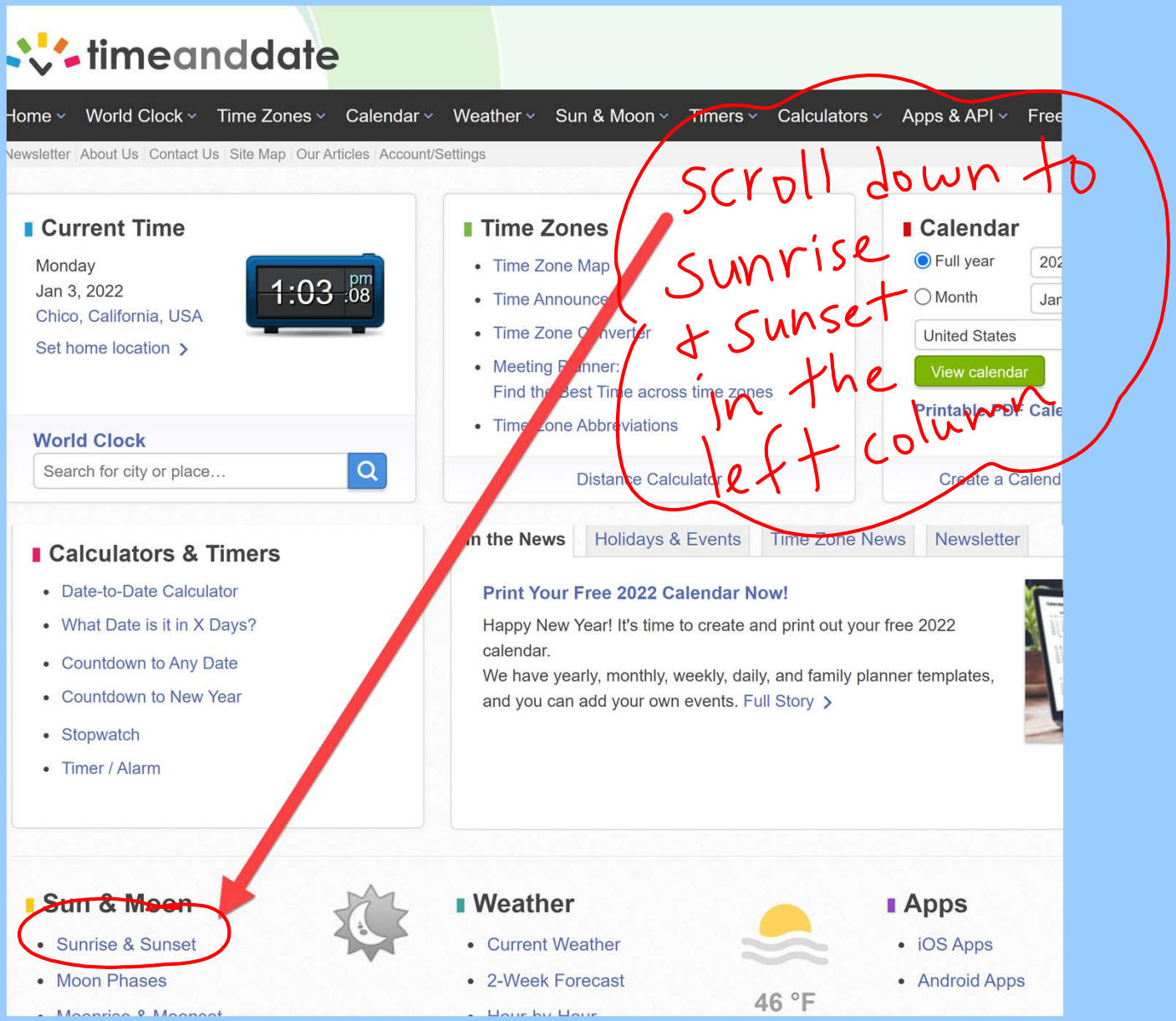
#3-4 → other international locations in the Northern Hemisphere

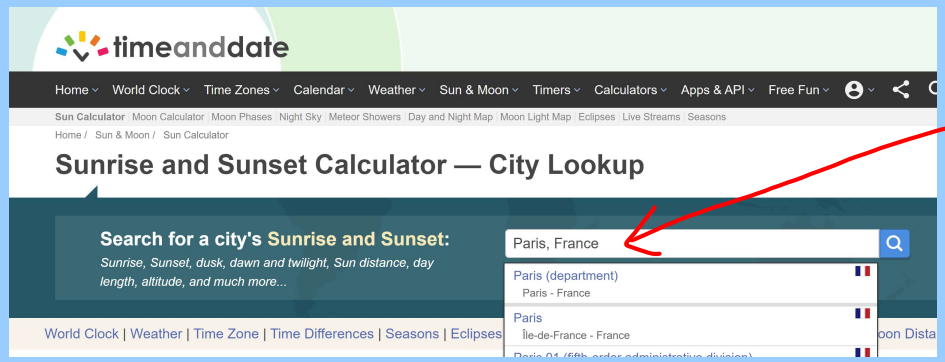
#5-8 → other international locations in the Southern Hemisphere

ABSENT STUDENTS:
CHOOSE A LOCATION IN EUROPE

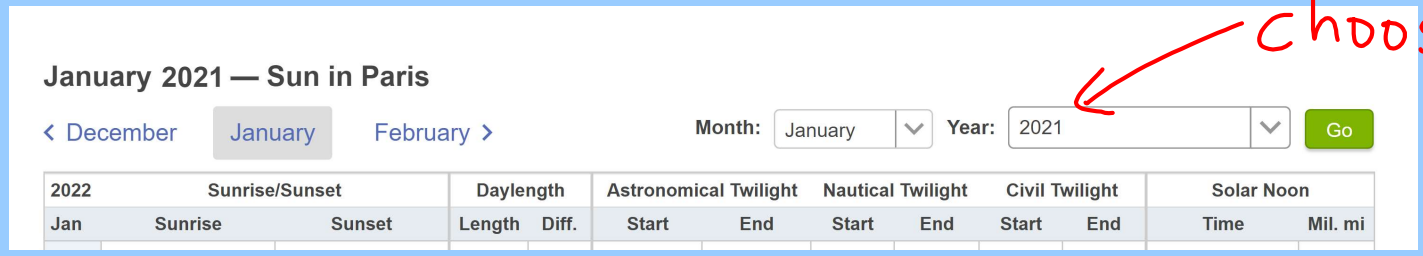
Choose a place you would like to visit someday or that just sounds interesting!
(Everyone must have a different location.)

See Google Classroom for links!



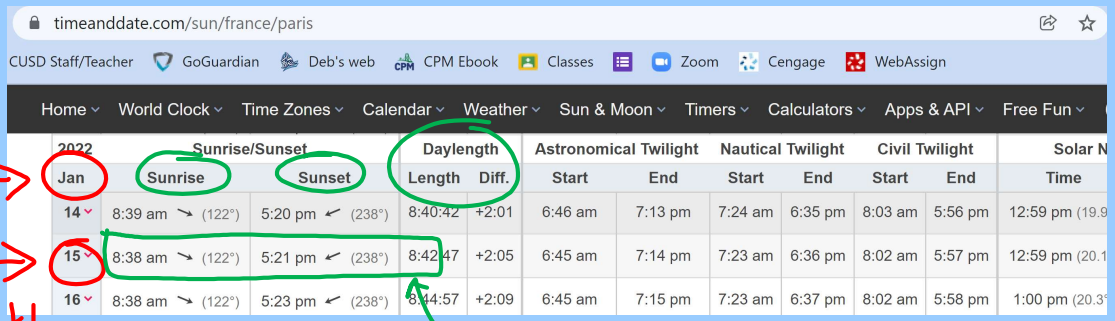


enter your location

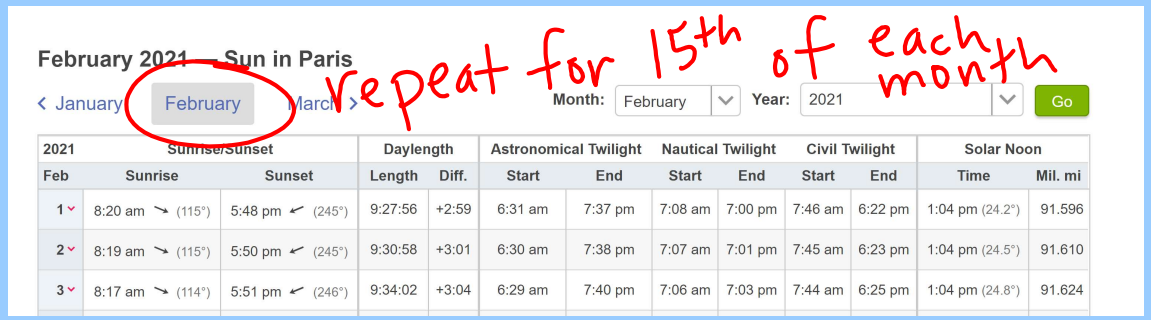


choose 2021

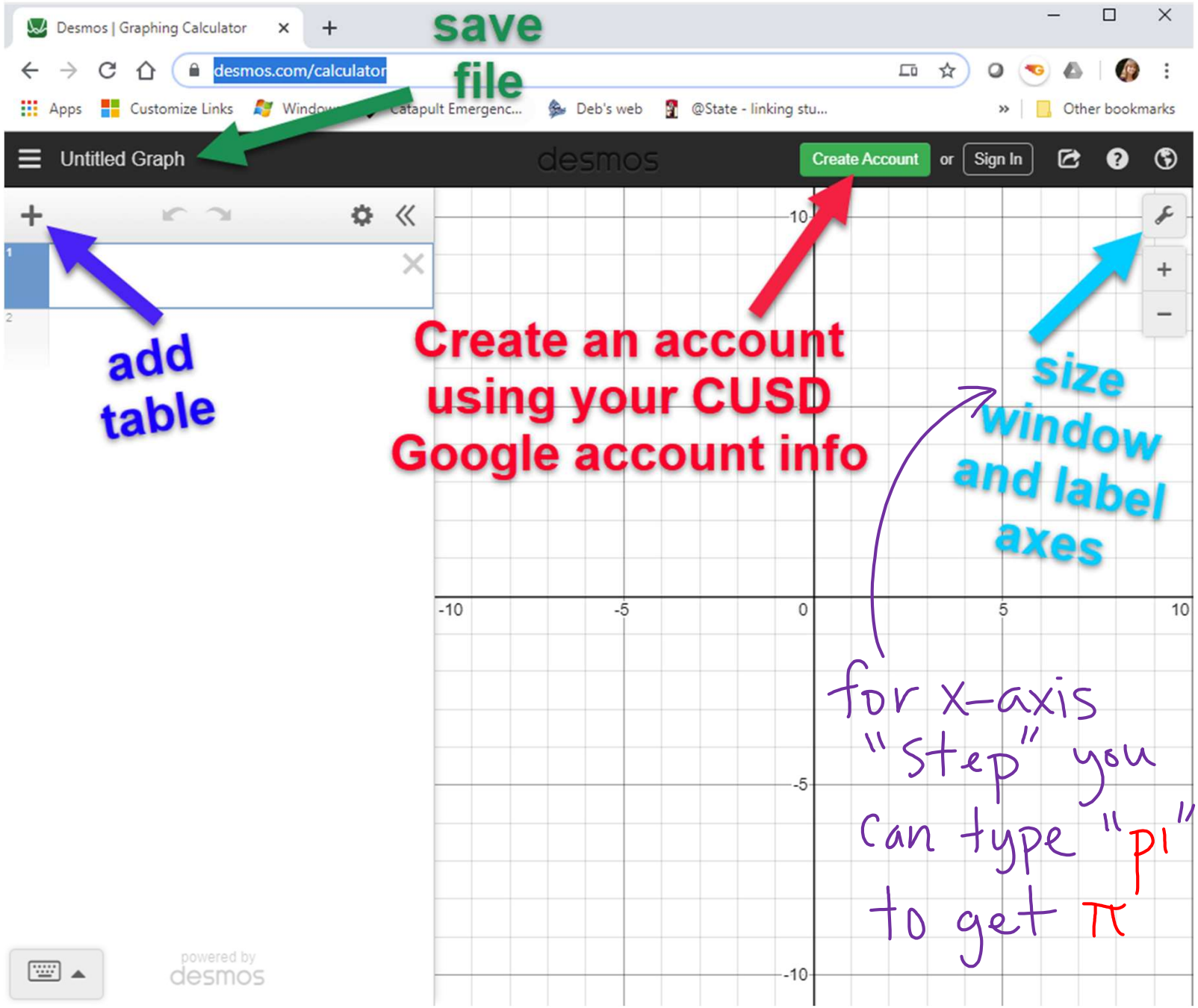
Use data from the 15th of each month



hours & minutes (no seconds)



repeat for 15th of each month


Desmos | Graphing Calculator
desmos.com/calculator
save
file
Apps
Customize Links
Deb's web
@State - linking stu...
Other bookmarks
Untitled Graph
desmos
Create Account
or
Sign In
add
table
Create an account
using your CUSD
Google account info
size
window
and label
axes
for X-axis
"step" you
can type "pi"
to get π
powered by
desmos