Eclipse Calculations – Looking at the NASA Data

A. How many eclipses we get year by year. Look at the 2011-2020 data sheets.

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Number of Solar eclipses										
Number of Lunar Eclipses										
Total number of eclipses										

What is the most common number of eclipses in a year?_____.

The number of eclipses each year is at least 4 times but can sometimes be 5, 6, or 7 (maximum). This means that the line of nodes stays in the direction of the sun for a window of time (less than 2 months), or "eclipse season." From the solar data sheet what are the **two** shortest times between 2 solar eclipses? and what can you say, from this data, is the longest "eclipse season"?
_____.

B. The number of days in between <u>Solar Eclipses</u> (refer to the Solar eclipse data sheet)

i.   We predicted that there should be eclipses every 6 months, what would this be in **days**, given there are 365.25 days in a year? _____.

ii.   The actually number of days between solar eclipses using NASA data.

1. Find the days from Oct. 23, 2014 eclipse to March 20, 2015: _____.
2. Find the days from March 20, 2015 eclipse to Sept. 13, 2015: _____.
3. Find the days from Sept. 13, 2015 eclipse to March 9, 2016: _____.
4. Find the days from March 9, 2016 eclipse to Sept. 1, 2016: _____.
5. Find the days from Sept. 1, 2016 eclipse to Feb. 26, 2017: _____.
6. Find the days from Feb. 26, 2017 eclipse to Aug. 21, 2017: _____.

iii.   Find the average actual number of days in between eclipses (1-6), use an average
_____.

iv.   Find the difference between the actual (iii) and your predicted (i) number of days_____.

v.   From these numbers, can you determine whether eclipses occur earlier or later than 6 months? and predicting out one year, what would the difference in days be?
_____.