

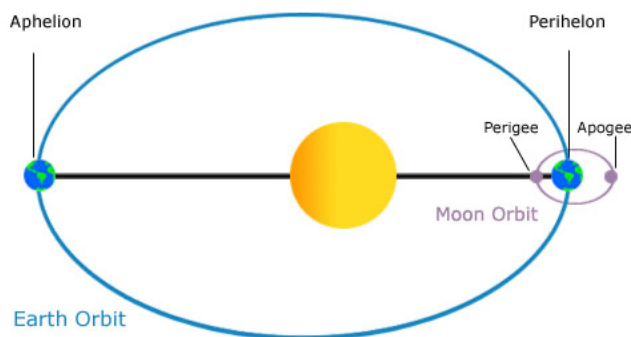
MATH 223 Fall 2023  
Assignment 2  
**Due: Friday, September 15**

### Reading

Read carefully Sections 2.2 “Limits and Continuity” and 2.3 “Derivatives” in our text *Multivariable Calculus: A Linear Algebra Based Approach*.

### Writing

Write out careful and complete solutions of Exercises 1, 4, 9, 10, 12, 13, 14 in Chapter 2.



### Some Answers and Hints

1.  $\frac{(x+1)^2}{25} + \frac{(y-2)^2}{9} = 1$

4.  $\frac{(x)^2}{92.96^2} + \frac{(y)^2}{92.95^2} = 1$

9. Hint: Show that the distance between  $x$  and  $\frac{x+y}{2}$  equals the distance between  $y$  and  $\frac{x+y}{2}$

12. The magnitude of the vector is  $\sqrt{39}$

13. Complete the squares in  $x$  and in  $y$ .

14. Center is  $(1, 2, 3)$