1. Read Section 8.2 and answer the questions below.

2. Give three biographical details about Rene Descartes.

3. **[A 3-line Problem]** Suppose you have three lines: $L_1 : y = 0$, $L_2 : x = 0$, and $L_3 : x = 2$. Describe the locus of points such that $d_1^2 = 3d_2 d_3$ where d_i is the distance to line L_i. Your description should be both algebraic and graphical. The use of graphing tools is acceptable!

4. Give a 2-sentence summary of Descartes' celestial vortices theory. (pg 375-6)