**Presentations06**

**Early Modern and Early Calculus**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Topic/Exercise** | **Presenter** |  |
| 1 | Calculate the Parallax, from opposite sides of earth’s orbit (~ 184,000) miles), of the nearest star. |  |  |
| 2 | Show that light traveling along a line toward a parabolic mirror (assume equation ) parallel to the axis of symmetry is reflected toward the focus. (Use some modern calculus and DE’s.) |  |  |
| 3 | State and explain Newton’s generalized binomial theorem. |  |  |
| 4 | Use the binomial theorem to expand . Then use long division to do the same expansion. |  |  |
| 5 | Use the binomial theorem to expand . |  |  |
| 6 | Use long division and (modern) integration to obtain Mercator’s identity:  [See #4 above.] |  |  |
| 7 | Derive Newton’s method to calculate a root of an equation. Do an example. |  |  |
| 8 | Select problems from your textbook from the section on the development of probability theory to do. |  |  |
| 9 | Select problems from your textbook from the Early Calculus section to do. |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |