

Descartes to Mersenne

(Excerpt)

Monday, January 18, 1638

MY REVEREND FATHER,

1. I would much prefer to say nothing about the writing that you sent me, because I would not know how to say anything favorable about its author. But because I recognize that it is he himself who earlier attempted to refute my *Dioptrics*, and since you tell me that he had sent this after having read my *Geometry* and having been shocked that I had not at all found the same thing, that is to say, as if I am expected to interpret it in order to enter into a competition with him and demonstrate that he knows more than I do; and also because I learn from your letters that he has a reputation of being very knowledgeable in Geometry – for these reasons, I believe I am obligated to respond to him.

2. First therefore, I find a manifest error in his rule, and a still greater one in the example that he gives of it, for finding the subtangents of the parabola: which I find in this way.

Let BDN be the given parabola with DC as diameter (*fig. 60*), and from given point B the straight line BE must be drawn, reaching DC at point E, such that it were the greatest that could be drawn from the same point E to the parabola: *sic enim proponitur quærenda maxima*.¹

The remainder of the letter deals with Fermat's method of *maxima and minima*, and has not yet been translated.

¹Since this is the way maxima are proposed to be found.