

pose of giving completeness to the figure, so as to enable the necessary combinations and comparisons to be made in an orderly and systematic manner. The geometrician is now in a position to obtain the answer to the requisition. This is at first briefly stated as a positive or decided conclusion. The demonstration then follows; in which the answer to the requisition as stated is justified by the facts upon which it is based, and shown thereby to be the only correct explanation of the result.

We have elsewhere stated that the primary and most important of the two-fold purpose which Euclid's work had in view was to teach and illustrate the philosophy—*i.e.*, the scientific system of reasoning, and that the application of the philosophy in his treatise on the science of 'Form and Magnitude,' does not justify the inference that the philosophy has a peculiar connection with that one division of science, and that it is not, with the requisite modifications, equally applicable to the other divisions of science.

\* *Note (a).* In writing thus it is to be understood that we are idealizing Euclid and considering him as the representative author of a work which cannot reasonably be supposed the production of one individual only; it may be that a large part of the 'Elements,' as well as the arrangement of the parts and the coherent complete-

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the conclusion that it contemplates accepting) for the approval of reason. If reason approves, the experiment succeeds; if reason disapproves, the experiment fails. It may be an exhibition experiment: the experimenter has himself accepted the result (he has repeatedly performed the experiment and has knowledge that reason approves the arranged case), but he exhibits the experiment. For what purpose? In order to demonstrate to the spectators the approval of reason; or, more strictly speaking, to demonstrate the legitimacy of the arrangement and soundness of its conclusion, which conclusion is thus authorized and commended by reason for the mind's acceptance as knowledge.