

Iamblichus,
De communi mathematica scientia xxii

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*What was the special concern of the mathematical science, according to Pythagoras,
and how many uses it has in view, for the soul and for humans,
as well as how they turned it to account in the entirety of their own private lives*
[6.17-20 Festa]

This, however, is not enough. [3] But since when Pythagoras acquired mathematics from foreigners he added much of his own, we need to take account of these sorts of principles as well and to include the special stamp he placed on mathematics. [7] **He took a philosophical view of many of the truths of mathematics, and made them part and parcel of his own projects, even the ones handed down to him by others, and made them fit in a suitable arrangement, he conducted the appropriate investigations about them, and produced the same agreement always in all respects, so that it never violates its logical consequence.** [13] *So we must not lose track of these sorts of principles, and follow the trail of Pythagorean mathematics.* [67.3-14]

And let's take its distinctive features as if they were elements in common, so as to hear directly their symbolic and rebarbative use of mathematical terminology, for, having fixed his aim on the things that exist and are true, in the same way he gave the natural names to mathematical items as well. [19] **And he fashioned them into a starting point for his instruction, which was capable of guiding his listeners, if any of them, by sufficient experience, could understand the terms sufficiently.** [22] **Indeed, in the purity, subtlety, and precision of his demonstrations, surpassing every similarly formed theoretical observation of other things, he both employs great clarity and sets out from familiar facts; and the finest thing found there is, in fact, the highmindedness and the aspiration to the primary causes, which both fashions its teachings for the sake of practical affairs and also lays hold of the things in a pure way, at times even making the mathematical speculations touch on the theological ones.** [68.2] For these are the ones that, because they are distinctive common features of such a science, someone in the present would propose them as elements. [67.14-68.4]

As for how the hunt of it needs to be pursued, it is right to tell the whole of it by following the transmitted teachings of these men. [68.8] But since the greater part was worked out by these men, and it was preserved unwritten in memories which now no longer remain at all, about which no evidence is easy to find or discover, either from writings or from a hearsay witness, we need to do something like this: **setting out from small glimmers we should always build such things into a corpus and help make it grow, we should lead these things back to principles which are appropriate and fill in what was left out, and we should conjecture as far as possible their own opinion, what they would say, if it were permitted for one of them to teach us.** [16] **In fact, even from the consequences of the ones indisputably transmitted to us, we are able to make appropriate discoveries of the teachings that follow.** [19] **For such manners of investigation will allow us either to hit upon the real mathematical science of Pythagoras, or**

make a very close approximation to it, to the highest degree which is possible. [22] **And I have found that this mathematical procedure, the one diligently practiced by its own originator, is in agreement with this one,** [24] *for in every way it was special and distinctive relative to other disciplines, gazing at the soul and at the purification of the eye of the soul, producing a discovery of both the first forms and causes of mathematical reality, and fitting it together with the nature of the realities themselves, making it at home with the intelligible forms, and imparting the kinship of mathematical entities with the good and their affinity with each other.* [68.5-69.3]

Now then, since the mathematical discipline is like this, it earnestly and keenly and unremittingly sought out its theoretical observations. [6] **And in the soul it contributes to purity in cognition and subtlety of thoughts, as well as to precision in its reasoning and contact with their own incorporeal realities, as well as to symmetry and good temper and re-orientation to reality; and in the human person it provides order in his life, as well as respite from the passions and beauty in character traits, as well as discoveries of the other things that are beneficial to the human way of life.** [13] **And they turned it to account in the entirety of their private lives, weaving the profit from it into their actions and their manners of mind, as well as into the construction of their cities and into the management of their own homes, as well as into skilled manufacturing and preparations for war or peace; and generally they applied mathematical science in all parts of life, appropriately in business affairs, beneficially for those who use it, harmoniously in both these respects, and in all the other respects proportionately.** [69.4-22]

Now then, we need to follow along in these footsteps, not simply practicing the discipline of mathematics, for the mathematics that prevails today makes use of perception and imagination instead, and is a stranger to truth as well as having been deformed into an ally of becoming. [26] *So if we were wishing to practice the discipline of Pythagorean mathematics, it behooves us to pursue with serious effort its path, divine and elevating and purifying and perfecting.* [69.22-29]