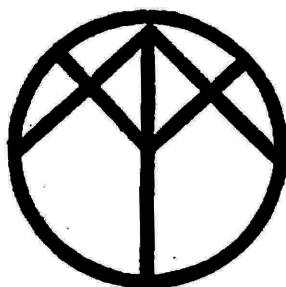


PYTHAGORAS MATHEMATICAL DISCIPLINES
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PYTHAGORAS MATHEMATICAL DISCIPLINES

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The system of Pythagoras had for its purpose the moral regeneration of a man by making of Virtue his real nature and habit¹. In the process of raising a man in Virtue, or, as it was sometimes expressed, raising him to his Divine or Shining Self², it was deemed essential that a man gain «empire of self»; or self-mastery of his animal nature³. If a man was to gain empire of Self, it was thought requisite that one should know the *nature* of Self. Hence, the Hyperborean-Pythagorean motto: *Know Thyself*⁴, which Pythagoras himself, among others, is accredited with having inscribed on the temple of Apollo at Delphi.

« Though it seems easy to *Know Thyself* », explained Pythagoras, « this is the most difficult of all things. Its message is, in any event, to discover our own power. This amounts to learning the nature of the whole extant world ; which, as God advises us, is impossible without philosophy »⁵. He goes on to explain further : « Neither art nor Wisdom can be acquired without preparatory learning. As the Lesser Mysteries are to be delivered before the Creator, thus also *discipline* must precede philosophy. Great and necessary is the attention which should be paid to *disciplines* as introductions to philosophy »⁶. The medium through which Truth is comprehended is *Nous*⁷, or *Reason* as the term is sometimes translated.

On this point the Sage says, « It is Reason — not Reason in general — but that developed by *mathematical disciplines*, which is capable of understanding all things », and adds enigmatically, « If this Reason is capable of understanding all, it is only that its essence is kindred with this nature, for it is in the nature of things that the similar be understood by the similar »⁸.

The Pythagorean conceived Philosophy as the purification and perfection of human nature ; « its purification because it delivers it from the temerity and from the folly that proceeds from matter, and because it disengages its affections from the mortal body ; and its perfection, because it makes it recover its origi-

nal felicity, by restoring it to the likeness of God »¹. Hence, it would appear that the means to the purification of mind necessary to philosophy is the *mathematical disciplines*².

« These surrounding thickets infested with passions, will have to be cleared out with systematic disciplines, as if with fire and sword ; and when the Reason will have been liberated from so many and great evils, we are in a position to offer to it, and implant within it, something useful and good »³.

« These sciences were first termed *Mathemata* by Pythagoras ; because they related to *Mathesis*, or *Discipline* »⁴. Stanley elaborates : « The Mind being purified [by Disciplines] ought to be applied to things that are beneficial ; these he procured by some contrived ways, bringing it by degrees to the contemplation of corporeal things, which are ever in the same state ; *** To this end, he [Pythagoras] first used the Mathematical Sciences, and those speculations which are intermediate between corporeals and incorporeals (for they have a three-fold dimension, like bodies, but they are impassible like Incorporeals) as degrees of preparation to the contemplation of the things that are ; diverting by an artificial Reason, the Eyes of the Mind from corporeal things (which never are permanent in the same manner and estate) never so little to a desire of aliment ; by means whereof, introducing the contemplation of things that are, he rendered men truly happy. This use he made of the Mathematical Sciences »⁵.

Of what did these Pythagorean Mathematical Disciplines consist ? Perhaps this question cannot be authoritatively, twenty-five centuries after they were devised, other than to state that they consisted of exercises the object of which was to purify the mind ; — psychological brain-washing, to use a modern concept.

They appear to have included,

1. Silence.
2. Mnemonics.
3. Temperance.
4. Fortitude.
5. Philanthropy.
6. Intellectuality, erudition.
7. Music, catharsis.

1. *Pythagoron*, 4.— Hierocles, *Commentaries Golden Verses*, 1.— Iamblichos, *V.P.*, xvi.

2. *Pythagoron*, 49.

3. *Pythagoron*, 50.— Diogenes Laertios, viii, 33.— Smith, *Dict. Biog.*, III, 625.

4. *Pythagoron*, 5, 79, 105 ; also 50.

5. *Pythagoron*, 6.

6. *Pythagoron*, 7.

7. *Pythagoron*, 189, 41, 42, 43, 121.

8. *Pythagoron*, 9.— Porphyry, *V.P.*, 47.

1. Hierocles, *Commentaries on Golden Verses*, 1.— Iamblichos, *V.P.*, xvi.— Taylor, 48. *Pythagoron*, 79.

2. *Pythagoron*, 11, 65.— Iamblichos, *V.P.*, xii, xvi, xviii.— Taylor, 39, 48, 50, 64. See, *op. cit.*, xx.— Plato, *Phaed.* 67, CD.— Loeb, 233.— Porphyry, *V.P.*, 46-47.

3. *Pythagoron*, 42, 62.— Porphyry, *V.P.*, 47.— Stanley, *History of Philosophy*, 377.

4. Proklos in Euclid, i, 25.— Stanley, *Hist. Phil.*, 377.

5. Porphyry, *V.P.*, 47.— Porphyry, *Perception Intelligible Natures*, ii, 34.— Proklos in Euclid, i, 25.— Stanley, *Hist. Phil.*, 377.

8. Fasting.
9. Contemplation, meditation.
10. Dietetics.
11. Method, Order.
12. Hygiene, Physical.¹

Silence was esteemed by Pythagoras as the Golden Virtue, who associated it with deity, — *the Great Silence*. Silence is divine, because God reveals his meaning to the wise without voice². It was thought that Silence calmed and purified the Mind and made it more receptive to reason and perception of Truth, and produced a state conducive to union with deity.

To think in word-language was to restrict thought to inadequate capacity of vocabulary. Besides an exercise in attainment of self-mastery, Silence was regarded as a tonic or aid to Memory³. Thus the Pythagoreans were « habitually silent and prompt to hear, and he who was able to hear in a proper manner was praised by them »⁴. The Pythagoreans, also, were men of few words, who reflected in silence before they expressed their thoughts in words, and then used no unnecessary word⁵.

« Pythagoras taught nothing (as Apuleius saith) to his disciples before Silence ; it being the first rudiment of contemplative wisdom to learn to meditate, and to unlearn to talk »⁶. Hence, the first discipline imposed upon the novices was Silence, — the quinquennial silence, as it has been called⁷. The subjection of the tongue he regarded as being the most difficult of all victories⁸.

Mnemonics. (*Mneme, anamnesis*) Pythagoras emphasized the necessity of training and perfecting Mind and Memory⁹, having in view many objectives.

1. Iamblichos, *V.P.*, vi.— Taylor, 21.— Stanley, *Hist. Phil.*, 395.
2. *Pythagoron*, 147.
3. *Pythagoron*, 147.
4. Iamblichos, *V.P.*, xxix.— Taylor, 119.
5. *Pythagoron*, 147-148.— Iamblichos, *V.P.*, xxiii.— Taylor, 71.
6. Reuchin, *Explic. Pyth. Doct.*, in Stanley, *Hist. Phil.*, 423.— Apuleius, *Florida*, 15.
7. Iamblichos, *V.P.*, xvi, xvii, xx.— Taylor, 48-49, 51, 69 ff.— Diogenes Laertios, viii, 10.— Loeb, II, 329, 328 n.— Porphyry, *V.P.*, 19.— Julian, *Orat.*, viii. *Sallust*.— Loeb, II, 195.— Apuleius, *Florida*, 15.— Lucian. *In Vit. Act.*— Aulus Gell. c.— Seneca, *Epistle*, ii.— Loeb, I, 349.— Philostratos, *VAT*, I, 1 ; Loeb I, 5 ; VI, iii ; VII, xi ; Loeb II, 39, 89.— Clemens Alex. *Strom*, V, xi.— Hippolytos, *Ref. H.*, I, ii ; VI, xvii.
8. Agellus, I, 4.— Eusebios, *Treatise*, xii.— Leob Ed. Philostratos, *VAT*, II, 517. — *Eccl. Hist.*, IV, vii.— Loeb I, 317.— Stanley, *Hist. Phil.*, 372-373.
9. Iamblichos, *V.P.*, xvii, xxxi.— Taylor 51, 140.
10. Diogenes Laertios, viii, 24.— Loeb, II, 341 ; also *id.*, viii.4.— Loeb, II, 323-325.— Iamblichos, *V.P.*, xviii, xxiv, xxx.— Taylor 58, 120-121.— Porphyry, *V.P.*, 26.— Diodoros Siculos, X, v. 2.— Loeb, IV, 59.— Plutarch, *Cess. Oracles*.— Cicero, *de Senect.*, xi, 38.— Loeb, 47.— Stanley, *Hist. Phil.*, 375.— Rohde, *Psyche*, Notes, XI, 96, p. 406.— Levy, *Legendi Pyth. Gren. Pal.*, 40.

Among these were mastery of self, increase of mental power, retention of learning, and preparation for illumination¹. The esoteric doctrines of Pythagoras were never written, but were orally delivered and committed to memory². Iamblichos comments : « The Pythagoreans were habitually silent and prompt to hear, and he won praise who listened most effectively. But that which they had learned and heard was supposed to be retained and preserved in the memory. Indeed the ability of learning and remembering determined the amount of disciplines and lectures, inasmuch as learning is the power by which knowledge is obtained, and remembering that by which it is preserved. Hence memory was greatly honored, abundantly exercised, and given much attention »³.

We are indebted to Iamblichos, also, for the well-known description of the Pythagorean memory-exercises. He states, « In learning, too, they did not dismiss what they were taught, till they had firmly comprehended the first rudiments of it ; and they recall to their memory what they had daily heard, after the following manner : A Pythagorean never rose from his bed till he had first recollected the transactions of the former day ; and he accomplished this by endeavouring to remember what he first said, or heard, or ordered his domestics to do when he was rising, or what was the second and third thing which he said, heard, or commanded to be done. And the same method was adopted with respect to the remainder of the day. For again, he endeavoured to recollect who was the first person that he met, on leaving his house, or who was the second ; and with whom he in the first, or second, or third place discovered. And after the same manner he proceeded in other things. For he endeavoured to resume in his memory all the events, of the whole day, and in the very same order in which each of them happened to take place. But if they had sufficient leisure after rising from sleep, they tried after the same manner to recollect the events of the third preceding day. And thus they endeavoured to exercise the memory to a great extent. For there is not anything which is of greater importance with respect to science, experience, and wisdom, than the ability of remembering »⁴.

This memory exercise was repeated in the evening. Porphyry states : « He advised special regard to two times : that when we go to sleep, and that when we awake. At each of these we should consider our past actions, and those that are to come. We ought to require of ourselves an account of our past deeds, while of the future we should have a providential care. Therefore he advised everybody to repeat to himself the following verses before he fell asleep :

1. *Pythagoron*, 9.— Aristotle, *Met.*, I, i. 2.— Porphyry, *V.P.*, 47.— Plotinos, *Enn.*, IV, iii, 26 ; vi. 3. Guthrie 27/431-432 ; 4/832-833.
2. Diodoros Siculos, X, v. 2 ; viii, 3.— Loeb, I, 59, 65.— Porphyry, *V.P.*, 57.
3. Iamblichos, *V.P.*, xxx.— Taylor, 120.
4. Iamblichos, *V.P.*, xxx.— Taylor 120-121.— Porphyry, *V.P.*, 40.— Diodoros Siculos, X, v.— Loeb, IV, 59.

40. Nor suffer sleep to close thine eyes,
41. Till thrice thou hast reasoned over each deed of the day ;
42. Wherein have I transgressed ? What have I done ? What have I omitted that I ought to have done ?
43. Beginning with the first do thou proceed, and for the evil deeds rebuke thyself ;
44. But for the good rejoice¹.
- « On arising :
- 44-a. As soon as thou awakest, consider calmly.

What are thy duties, and what you shouldst accomplish that day »².

Pythagoras avers that Mind comes to man by Divine Providence;³ «Mind sees, Mind hears ; all besides is deaf and blind»⁴.

Temperance. Pythagoras enjoined upon his disciples temperance and control of animal passions and desires. This teaching accords with that other Delphian motto : *Measure in all things* ; and with his own enigmatical precept, *Go not beyond the beam of the balance*. «Every thing incommensurate should be cut off with fire and sword»⁵. This discipline contemplates control of temper ; control of the tongue ; and control of the desires⁶ ; and also control of thought, emotion, fear, and apprehension⁷.

What was sought by this discipline was that state of balance which Pythagoras terms *sophrosyne*, or being precisely what one ought to be.

Fortitude. This discipline removed from the disciple all fear of death or hurt⁸ ; and engendered a manly courage and determination to be equal to every vicissitude of life. No man need ever fear that he will be unable to bear all things which may befall him⁹.

Pythagoras said : « Harmony is the most beautiful. Mental decision is the most powerful. Felicity is the most excellent. Felicity is naught else than the use of Virtue in prosperity and in adversity.

« He is indeed to be esteemed the most unfortunate who has not himself learned how to bear misfortune. No human casualties ought to be unexpected by those who are endowed with intellect ; but they should expect everything may happen which it is not in their power to prevent.

1. Porphyry, *V.P.*, 40.—Cicero, *de Senect.*, XII.—Loeb, 47.

2. Porphyry, *V.P.*, 40.—d'Olivet, *Golden Verses*, p. 227.—*Golden Verses*, 40-44-a.—*Pythagoron*, 86-87.

3. Clemens Alex. *Strom.*, V, XIII.

4. Clemens Alex. *Strom.*, II, V.—*Pythagoron*, 41.

5. *Pythagoron*, 131.

6. *Pythagoron*, 146, 110.

7. *Pythagoron*, 131, 146-147.—Iamblichos, *V.P.*, ch. XXI.—Taylor 135 ff.

8. Iamblichos, *V.P.*, XXXII.—Taylor 156.—Philostratos, *VAT.*, VI, XI.—Loeb, II, 39.

9. *Pythagoron*, 131.

« Fortitude is the art of avoiding as well as enduring, concerning all the woes that mortals have through divine Fortune. Whatever portion thou hast, bear this, and be not vexed ; but it is befitting, insofar as thou canst, to remedy it.

« Whatever fate thou hast, bear it, nor murmur. Danger is to be encountered with a firm and manly mind. It is well to sustain and shew wounds, if they are in the breast, but not if they are behind.

« It is the province of the wise man to bear poverty with equanimity »¹. In the terrestrial life everything is relative, and there are degrees of goodness and badness. Pythagoras declared that there is a *Golden Medial* : « Between good and evil there is a medium, which is neither good nor evil »².

Pythagoras, therefore, sought to engender in his disciples a universal philanthropy, through which God and his Goodness, Truth and Beauty might be beheld with love and appreciation, and the fellow creatures might be viewed with generosity, kindness, and understanding. Through philanthropy we come to know the world as a living being of goodness and perfection, and self-purifying under the inexorable law of Compensation ; and to know the seeming wrongs and evils to be the transitory creatures of ignorance and depraved opinion ; and to know that we possess not the necessary Wisdom upon which we can pass condemnatory judgment.

Philanthropy. Pythagoras conceived that man is the result of aspiration and evolution³ in a universe of Goodness, Truth, and Beauty, which is the work of a Deity of Perfection. The world itself⁴ is perfectly good, « nor could it give true resemblance of its Original and Exemplar if it were not the one only begotten thing full of perfection »⁵. Any conception of the world, and its creation, and its Creator, otherwise than good and holy, springs from Man's opinion based upon his ignorance of Good, and his failure to comprehend the nature of all that is about him and within him⁶. God only is absolute ; all else is relative⁷. The Worlds of Divinity, of Goodness, and of Truth are worlds of the eternal *Now*, timeless and unchanging⁸. The *kosmos*, the World of Beauty, is the phenomenal world, the world of fleeting time and changing form⁹.

We come to know the truth of the admonition :

1. *Pythagoron*, 112-113.—Iamblichos, *V.P.*, ch. XXXII.—Taylor, 151 ff.—*Golden Verses*, 15-20.

2. *Pythagoron*, 35, 36.

3. *Pythagoron*, 50-51.

4. *Pythagoron*, 53-54.

5. *Pythagoron*, 43.

6. *Pythagoron*, 52-53, 55, 57, 91-92, 100, 128.—*Golden Verses*, 54-62. *Pyn.*, 195.

7. *Pythagoron*, 38.

8. Porphyry, *Percept. Intell. Nat.*, 44.—Plotinos, *Enneads*.—*Pythagoron*, 40, 41.

9. Plotinos, *Enneads*.—*Pythagoron*, 40, 41.

« What to thy dim eyes may seem a stain,
In God's clear light may prove a scar
Won on some hard-fought field
Where you might faint and yield.»

Thus with Prudence, Magnanimity, Fortitude, as the strong anchors, which no tempest can shake¹, condemnation, hatred, retaliation, revenge, give way to magnanimity, compassion, and kindness, leaving judgment to compensation².

Perhaps Pythagorean Philanthropy might be best defined as a harmonic attunement of one's life with God and a universe of Goodness, Truth, and Beauty;³ a loving friendship for God, the World, and the fellow-creatures⁴.

Intellectuality. This discipline had for its purpose a mental house cleaning, with the objective of attaining intellectual honesty so that Truth might be perceived with mind purified from all malediction and error⁵. «It is by Intellectual Honesty everything is seen in right perspective»⁶. «Truth is to be sought with a mind purified from the passions of the body»⁷.

This discipline included training and purifying the mind by various forms of exercises and erudition, such as Geometry, formulas, enigmas, scientific investigation, and the like⁸. Under it also was erudition in general, which amounted to «learning the nature of the whole extant world»⁹. Prudence, Sagacity, and the other subjects mentioned by Iamblichos, perhaps, fall in here.

Music is one of the best known of the Pythagorean mathematical disciplines. They called Philosophy Music¹⁰. The requirement of Music, Astronomy, and Geometry as first approaches to the pursuit of philosophy did not appeal to Justin Martyn, according to his own statement¹¹, therefore, he did not become a Pythagorean.

Pythagoras conception of Music is that «it includes every art over which the Muses preside, or which the Graces adorn»¹². The present day notion of music, or *symphonia*, is but one phase of his grandeur concept of the Divine Har-

1. Pythagoron, 107.
2. Pythagoron, 58, 59.
3. Pythagoron, 57, 58, 59, 177.
4. Pythagoron, 154.
5. Adam, *Religious Teachers of Greece*, 332.
6. Pythagoron, 84, 42, 27.
7. Pythagoron, 62.
8. Porphyry, *V.P.*, 46, 47, 48, 49.
9. Pythagoron, 6.
10. Strabo, *Geog.*, X, iii, 10 C 468.—Loeb, V, 95.
11. Justin, *Trypho*, ii.
12. Pythagoron, 178.

mony, (harmonia) of the Universe, symbolized by *Music of the Spheres*¹. Pythagoras' idea of Harmonia, is the fitting together of the Many into the One into a complete harmonically attuned pattern². In the words of an eminent authority: «We find running through the entire Pythagorean system the idea that order, or harmony of relation, is the regulatory principle of the whole universe»³.

This discipline was calculated to acquaint the disciple with this principle and to bring him individually within its operation⁴.

While the curriculum of Pythagoras included under the head of Music the subject of music as we know it, reading, performing, and composing, singing, dancing, rhythm, and poetry⁵; yet music had a more peculiar significance in the system. Its function was to raise the mind of man to the divine; to fuse man with God, so to speak⁶. As Adam observes: «Music is the means whereby 'we learn to read in the moral world': its object is only then attained when we have conceived an abiding passion for the beautiful in the comprehensive meaning attached to the word *kalon* in ancient Greece — moral and spiritual beauty, as well as the beauty of material objects»⁷.

Pythagoras, of course, is well known to have collected tunes and music of all lands, and to have analyzed and classified them according to their effect upon the emotions, passions, and mentalities of both men and beast⁸. These tunes he prescribed for cure or correction of various ailments and obsessions⁹. It was no doubt he who prescribed the tunes which infuriated the horses of the Sybarite cavalry and enabled the Krotoniats to vanquish the superior enemy¹⁰.

1. Pythagoron, 177-178.—Porphyry, *V.P.*, 30, 31.—Iamblichos, *V.P.*, xv.—Taylor 44-45.—Plato, *Rep.*, 617B.—Athenaeos, *Deipn.*, XIV, 632b-c.—Aristotle, *De Caelo*, II, ix 290b 15.—Plutarch, *Conc. Music.*—Diehls, p. 555, 20.—Hippolytos, *Ref. Her.*, I, ii; xx.—Smith, *Dict. Biog.*, III, 621, 624.—Comperz, *Greek Thinkers*, I, 118-119.—Dacier, *V.P.*, 84.—Stanley, *Hist. Phil.*, 393, 440-442.

2. Pythagoron, 176n.—Hippolytos, *Ref. Her.*, VI, xx.

3. Smith, *Dict. Biog.*, III, 621-622.—Plutarch, *Conc. Music.*—Quintilian, *Inst. of Or.*, I, x, 12.—Hippolytos, *Ref. Her.*, I, ii; VI, xx.—Dacier, *V.P.*, 63-64.—Cambridge, *Ancient Hist.*, V, 547.

4. Plutarch, *Conc. Mus.*—Quintilian, *Inst. Or.*, I, x, 32.—Strabo I, ii, 3.

5. Iamblichos, *V.P.*—Porphyry, *V.P.*, 32.

6. Schulian-Schoen, *Music-Medicine*, 69.—Strabo, *Geog.*, X, iii, 10.

7. Adam, *Religious Teachers of Greece*, 403.—Plato, *Rep.*, iii, 401A-403C.

8. Iamblichos, *V.P.*, xvi, xxv, xxix, xxxii.—Taylor 43-44, 80, 119-120, 158-159.—Porphyry, *V.P.*, 30, 31, 32, 33.

9. Porphyry, *V.P.*, 30, 33.—Iamblichos, *V.P.*, xv, xxv, xxxii.—Taylor, 43-44, 80, 158-159.—Caelius Aurelianus, *Chron.*, V, 1, 2, 3.—Levy, *Legendi Pyth. Gren. Pal.*, 42.—Stanley, *Hist. Phil.*, 389.

10. Athenaeos, *Deipn.*, xii, 520d-e.—Loeb, V, 343-345.—Diodoros Siculus, XII, 9.—Loeb, IV, 389-390.—Aul. Gell., I, xi.

Practically every Pythagorean was a musician, and the curriculum included the playing or singing of music before retiring to sleep¹, or whenever the mind or nerves required relaxation, or peaceful serenity². The philosopher regarded Music as possessing therapeutic value as well as purificatory properties³.

The most extraordinary and astounding feature of this mathematical discipline, would appear to be the nightly purificatory transmissions of the Music of the Spheres to the disciples through Pythagoras as medium by what might be described as mental or telepathy, or spiritual theosophy⁴: Pythagoras asserted that there exists a Divine Music of the Universe which ordinary mortals are oblivious to because of continued hearing, but which he himself was able to hear and to grasp⁵, and to transmit to others who had been prepared to receive it⁶. Pythagoras posited a World Mind or Universal Intelligence in which everything participates according to degree of capacity⁷; but whether or not the Universal Mind and the Divine Music of the Universe are identical must remain unanswered.

Fasting. Pythagoras prescribed that his followers should take sufficient food to keep the body in uniformly good condition of health. He and his followers were among the ancient sects which habitually practiced fasting, or total abstinence from food for prescribed lengths of time⁸. This practice was one of the mathematical disciplines.

Pythagoras regarded fasting as purificatory both physically and mentally. Hence some Pythagorean fasts were therapeutic and were undertaken and endured at and for such periods as was deemed necessary for the purpose⁹. Others were ritualistical, undertaken in connection with the mystery-religions of which the Pythagoreans were affiliates¹⁰. The highest use of the practice was to purify the mind in aid of meditation and contemplation¹¹.

1. Quintilian, *Inst. Orat.*, IV, iv, 12.—Athenaeos, *Deipn.*, XIV, vi, 624.

2. Cicero, *Tusc. Disp.*, IV, ii, 3.—Loeb, 329-331.—Porphyry, *V.P.*, 30, 33.—Iamblichos, *V.P.*, xv, xxv, xxxi.—Taylor, 43-44, 80-81, 82-83, 170.—Plutarch, *Poetry of Homer*.—Plutarch, *Is. & Osir.*—Athenaeos, *Deipn.*, XIV, 623-624.—Loeb, VI, 363-365.—Smith, *Dict. Biog.*, III, 625.

3. Rohde, *Psyche*, Note Ch., XI, 48.—Iamblichos, *V.P.*, xvi.—Taylor, 48.

4. Iamblichos, *V.P.*, xv.—Taylor, 43-46.—See also Porphyry, *V.P.*, 29, 30, 31.

5. Porphyry, *V.P.*, 30.—Iamblichos, *V.P.*, xv.—Taylor, 43-48.—Simplicios, *Com. Arist. de Caelo. Bk. II*, see note Taylor, Iamb. pp. 44-46.

6. Iamblichos, *V.P.*, xv.—Taylor, 43-48.

7. Iamblichos, *V.P.*, xv.—Taylor, 44-46, 47-48.—Porphyry, *V.P.*, 31.

8. Empedokles, *Fr.*, 144.

9. Plutarch, *Rules for Preservation of Health*.—Plutarch, *Symposiacs*, II.

10. Porphyry, *V.P.*, 34.

11. Porphyry, *V.P.*, 34, 57.—Diogenes Laertios, viii, 40.—Loeb, II, 357.

Pythagoras is said to have made a religious retreat with forty-day fast in the temple on Mount Carmel prior to embarking for Egypt¹.

Contemplation, Meditation. This discipline might be said to be a goal of Pythagorean philosophy: the awareness of God's being or presence; an approach to union with Deity². Or viewed otherwise, it is the final step in the perfection of man's nature to make of it the image of God³; the subsistence in an indivisible untemporal *now*⁴.

The late beloved Pythagorean, Dean William Ralph Inge, explains: «*Theoria* in the Ionic Philosophy meant 'curiosity'; in the Mysteries the word was applied to a dramatic or sacramental spectacle such as the representation of a suffering god. Pythagoras is said to have been the first to give it a new meaning as the Contemplation, not of the sacrament, but of the underlying truths which sacraments symbolize. He found in the observation of the heavenly bodies a patent aid to this kind of contemplation»⁵.

Diet. This mathematical discipline had to do particularly with abstention from animal flesh as food, and from intoxicating liquors, and other unnatural and deleterious practices. It included generally the entire field of dietetics, and ethics of diet.

Method, Order. Pythagoras taught that the universe itself contains the keys and clues to scientific living⁶. The universe is constructed and operates upon principles of harmonic law and order; and the philosopher called it *Kosmos* because of its Order and Beauty⁷. Man he conceived as a Microcosm, a small kosmos, functioning on a smaller scale on the same principles⁸. The nature of the *Kosmos* indicates to man the ideal compensatory regimen of life and living; system, method, order, harmonic balance, without stress or strain, all in due season and in due measure and in due justice. He admonishes his followers to be attentive to Order and Method throughout life⁹. There is a due time, season, and measure for all things that are proper.

1. Iamblichos, *V.P.*, iii.—Taylor, 10-12.

2. *Pythagoron*, 62.—*Golden Verses*, 68-71, Pyn., 195.—Porphyry, *V.P.*, 46.—Iamblichos *V.P.*, xv, xvi.—Plutarch, *Face Orb Moon*.—Origen, *Adv. Celsus*, III, ixxx.—Clement. *Alex. Strom.*, VII, vi.—Augustin, *Cit. Dei.*, VIII, iv.

3. Hierocles, *Com. Golden Verses*, 1, 90-91.—Plotinos, *Enneads* 1. 6. 6-9. 6. 9. 7; Guthrie 1/49-55; 9/162, See notes, p. 50.—Lactantius, *Div. Inst.*, VII, ix.—Inge, William Ralph, *Phil. of Plotinos*, I, 186, 237; II, 178-179, 180.—*Pythagoron*, 11-13.—Dacier, *V.P.*, 14-15.

4. Porphyry, *Percept. Intell. Nat.*, 44.—Porphyry, *Comm. Plotinos Enn.*, 1. 2. 2. Guthrie, 1215.—*Pythagoron*, 79.—Origen, *Adv. Celsus*, III, ixxx.—Rohde, *Psyche*, 475.

5. Inge, *Phil. of Plotinos*, II, 180.

6. *Pythagoron*, 133-136.—Iamblichos, *V.P.*, xiv, xvi, xx, xxi.—Taylor, 27ff, 48, 70, 71, 71ff.

7. *Pythagoron*, 39.

8. *Pythagoron*, 49.

9. *Pythagoron*, 134.

« Sleep during the hours when sleep is most refreshing. Arise with the sun ; or better still with the clarion call of the cock. When you arise in the morning, make up your bed with dispatch, for night is the time for sleep and repose, but the day is for your labors and attention to duties. A man asleep is of no more use than one dead.

« A life of measure is also a life of Order and Method. Be attentive to Order and Method as long as you live.

« As soon as are you wake, in order lay the actions to be done that day. Exact from each day the utmost advantage, and avoid idleness and slothfulness.

« Leave no duty unfinished. No man is so old but thinks he may live another day. So arrange your affairs that you will have made reparation the day before you die. Always order your life as if today were your last.

« A man ought to order his life as if he were fated to live both a long and a short time. Always keep your bed packed up » ¹.

When a man or woman had undergone these mathematical disciplines, he or she became a *Mathematike* ; a man or woman of character, who made of Virtue his or her real nature and habit.

« Propriety is that which ought to be. This requires neither addition nor detraction, being what it should be. Impropropriety is of two kinds : excess and defect.

« The crux of the matter is this : To love Truth is to practice Truth : to love Wisdom is to live consistently with Wisdom. For when a man has the right attitude he instinctively practices Virtue, and the thought of another course is absent from him. It is impossible for a man to truly believe one thing and do another. It is impossible for a wise man to wrong » ².

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