1] Thales: "*arithmos* is a collection of units" [Iamblichus *Introductio Arithmetica* p. 10]

2] Pythagoreans – "made number out of one" 985a20.

3] Chryssipus "multitude one"

4] Moderatus [neo-Pythagorean, 60 a.d.] *arithmos* "a progression of multitude beginning from a unit and a regression ending in it." Stobaeus; Eclogae i. Proem. 8

5] Nicomachus "a flow of quantity made up of units"

6]: "Number is that by which the quantity of each thing is revealed." Simon Stevin

7] "An *arithmos* is a finite multitude..." Eudoxus

8] "limited multitude". Aristotle, *Metaphysics* 1020a 30

9] "a set/system of units" μοναδων συστημα Domninus 413

10] "*arithmos* is always a multitude of indivisibles" πληθοσ αδιαιρετων. Aristotle; Metaphysics 1085b22

11] 'an aggregate in the realm of quantity composed of monads' Nicomachus. 13, 8

12] Aristotle "an *arithmos* signifies a measured plurality or a plurality of measures" [*Metaphysics* 1088a6]

13] Platonic Def of #: A property of a group that belongs only to the group, not the individuals, and applies to the group only insofar as the individuals are considered to be identical. [implied in Hip. Maj]

14] By number we understand not so much a multitude of unities, as the abstracted ratio of any quantity to another quantity of the same kind, which we take for unity" (Newton, 1728).

15] numbers are whatever are needed to make sure that every equation has a solution Alfred North Whitehead

16] Aristotle gives a few implied definitions of *arithmos,* but here are some passages from his writings that employ *arithmos* in a way that gives a deeper sense of what he means by the term:

Metaphysics *Delta* 13, 1020a8-14:

Quantity [*poson*, literally "how much" or "how many"] is said to be that which is divisible into constituents, each of which is by nature one [or "a one"] and a "this" [*tode ti*, a specific indicable thing]. A plurality [*plethos*] is a kind of quantity if it [the quantity] is numerable [countable; *arithmeton*]; a magnitude is a kind if quantity if it [the quantity] is measurable. A plurality is said to be that which is divisible potentially into parts which are not continuous; a magnitude, on the other hand, is that which is potentially divisible into parts which are continuous....Of these, a limited [*peperasmenon*] plurality is said to be a *arithmos*, a limited length a line, a limited width a surface, and a limited depth, a

body.

Metaphysics *Iota* (I)6, 1057a2-6:

Plurality is as if it were [or "such as"; *hoion*] a genus of *arithmos*; for *arithmos* is a plurality measurable by the one. And in some sense [or "in a way"] the one and *arithmos* [or "a *arithmos*"] are opposed, not as contraries, but...as some relative things are; for the one in so far as it is a measure is opposed to *arithmos* in so far as *arithmos* is measurable.

Metaphysics *Nu* (N)1, 1087b33-1088a15:

The one signifies a measure, evidently. And in each case there is some different underlying subject [*hupokeimenon*, thing laid down], such as in the musical scale a quarter-tone; in magnitude a finger or a foot or some other such thing; and in rhythm a beat or a syllable....And this is also according to formula [or "definition" or "account": *logos*]; for the one signifies a measure of some plurality and the *arithmos* signifies a measured plurality [a plurality that has been measured] and a plurality of measures. Therefore it is also with good reason that the one is not a *arithmos*; for neither is a measure measures, but a measure is a principle [or "source", *arche*], and so is the one.

Definitions of Unit

1] Pythagoreans: "one is not a # since a measure is not the thing measured" 1088a7
2] Thymarides: [Pythagorean 4th b.c.e.] unit as a "limiting quantity" Iamblichus 11-12
3] "an unitie is no number but the beginning and original of number." Baker 1568
4] "...Ramus, and such that have written since his time, affirme not only that an unite or one, is a number, but also that evry fraction or parte of an unite, is a number..." Hylles 1592
5] "…unity alone out of all number, when it multiplies itself, produces nothing greater than itself…Unity, therefore, is non-dimensional and elementary." Nicomachus 238
6] "[a] if from a number there is subtracted no number, the given number remains [b] if from 3 we take 1, 3 does not remain [c] therefore one is not 'no number.' Simon Stevin
7] Rabbi Ben Ezra Sefer ha-Echad (Book on Unity) (1140) first to entertain idea that one is a number
8] "Multiplicity is the genus of arithmos. Because of this arithmos and one are opposites." Iamblichus [see also Aristotle Metaphysics 1056b 19ff]
9] "The one is the source of number" Metaphysics 1052b22ff.
10] Euclid v. 1 120 "…a unit is that which is indivisible in respect of quantity…"

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