Dates in parentheses are doubtful.

(1900-1800)	Originals of Rhind and Moscow Papyri, including calculation of the volume of a truncated pyramid and value for circle area of $((1-1/9)*D)^2$, which yields $\pi \approx 3.160$ (the Babylonian/Biblical value is 3).
(1800-400)	Prehistory of Babylonian astronomy. Division of zodiac into 12 sections of 30 degrees, a fixed lunar solar calendar, development of strong numerical techniques, careful observations of risings, settings, eclipses, and an empirical understanding of some basic relationships. In Egypt, there is adopted a straight 365 day calendar, divided into 12 months and 5 festival days (this becomes the calender of astonomy). They divide the sky into ten sections, and the day and night, each into 12 hours. A water clock of the 17th cent. deals with the problem of variable day and night hours. They chart star risings over the course of the year. The contents of the omen texts serve as an ideological foundation for investigation. Babylonian mathematics includes solutions to quadratic equations, some cubic, approximations of square roots, possibly investigations of Pythagorean numbers. Babylonian mathematics and astronomy forms goes west into Egypt and the Greek world and east to India.
(1545-1525)	Amenemhet invents improved water clock, or so his tomb claims. Note that names of real inventors are very rare (two known examples?). The norm is to attribute them to a god (Toth) or to a semi-mythical hero of the past (Imhotep).
747	Reign of Nabonasar of Assyria. Ptolemy (2nd cent CE) reports having records of eclipses from this time. This is probably the beginning of an astronomically useful calendar.
584	Supposedly Thales predicts the year of a solar eclipse, which took place 24 May (cf. Herodotus I, 74). Neugebauer argues that this story is impossible. That it occured during an important battle and was visible there at all was either luck or historical 'attraction' (it is common that great human events are reported to occur in conjunction with great natural events). Probably, this sort of prediction was common in Babylonia. Thales claims that all things come from water. He is probably inspired by Greek, Egyptian, and Babylonian creation stories. But his account comes with arguments and is commonly regarded as the beginning of natural, i.e. non-theological accounts.
611/10-~540	Anaximander of Miletus, who claims that everything comes from the infinite which is not any particular element, may have built on Persian creation stories (his cosmology is somewhat Persian), but provides rationalist arguments for his views. His account is original in many details.
late 6th. c.	Anaximenes of Miletus, who says that all things come from air, may have suggested empirical arguments for his view. He may the first to treat an account of a single origin of things as also providing a single fundamental constituent of things.
540-520	Sometime in this period, Pythagoras of Samos establishes his ‘cult’ in Croton, in so. Italy
?-c. 480	Heraclitus of Ephesus, who holds to view that everything is in a state of change determined by a logos (rational account in things?)
515-?	Parmenides of Elea in Italy, who holds that nothing changes.
485-after 444	Protagoras of Abdera, an important sophist.
(500-400)	Probable time of development of Babylonian System A for calculating lunar positions.
c. 500-428/7?	Anaxagoras of Clazomenae, who holds the junk of the universe consists of a multitude of elements, bone, earth, hot, cold, etc. all of which are in everything, but some of which predomnate in some things (e.g. bone in bone).
c. 495-35	Empedocles of Acragas (in Sicily), who posits earth, air, fire, and water, governed by the two principles of Love and Strife.
494	Destruction of Miletus by the Persions.
c. 490-?	Zeno of Elea in Italy, a follower of Parmenides, produces some slick arguments for this odd view.
(480/79?)	Anaxagoras arrives in Athens and takes up philosophy.
480/79	Defeat of Persians at Salamis and at Plataea. Beginning of Athenian naval domination in the Aegaean and Western Mediterranean.
470/69	Socrates born. Socrates, apparantly was not interested in the physical doctrines of his contemporaries, but instead worried most about definition and the possibility of acquiring knowledge from the hunt for definitions.
(470-400)	Hippocrates of Cos. Much of the work attributed to this important theoretician of Greek medicine is certainly by other members of his school or by members of rival medical schools. Some show the influence of natural philosophers such as Empedocles, Anaxagoras, and Philolaos and span the fifth and fourth centuries. His work includes careful observations of the courses of diseases.
460-?	Democritus of Abdera, who, along with Leucippus (of whom less is known), postulated the universe composed of atoms (can't be cut up) differing in size, shape, and position. E.g. fire is spherical atoms.
(450-350)	Composition of most of the Hippocratic Corpus (works attributed to Hippocrates of Cos)
(450)	Trial and expulsion of Anaxagoras from Athens for atheism (or 432).
431	Peloponnesean War between Athens and Sparta (with Thebes and Corinth)

(430) Meton suggests a 19 year cycle for a lunar calandar (probably already in use in Babylonia, although the oldest known tablet with such a calandar is 380. Oenopides discovers inequality of seasons.

(c.a. 430?) Hippocrates of Chios, first to square a curvilinear figure and first to attempt an Elements of geometry.

427 Plato born.

408/395-355/42? Eudoxus of Cnidos, perhaps the greatest of a distinguished lot of fourth century mathematicians, came up with the so-called exhaustion technique in geometry (Euclid, Elements XII), the unified theory of proportions (possibly Elements V), and the first geometrical model of planetary motion. He also publishes a description of constellations. He produced a measurement of the earth and of the distances of the sun and moon. He probably associated with the Academy (see below).

404/403 End of Peloponnesian war with defeat of Athens, followed by rule of thirty tyrants in Athens.

399 Trial and death of Socrates in Athens, after which Plato moves to Megara (and possibly travels). Plato begins to write dialogues.

387 Plato's 1st trip to Syracuse in Sicily. He meets Dionysius I, tyrant of Syracuse, Dion and Archytas, the Pythagorean. Probably beginning of Plato's interest in mathematics as important for the understanding of the physical world.

(385) Plato begins teaching at Academy. The institution there lasts until the closing of Pagan schools in 529 C.E. Beginning of middle period of Plato's writing.

384 Aristotle born

367 Aristotle arrives at Academy.

(360-350) Plato writes the Timaeus, a work which forms the backbone of the anti-Aristotelian trend in neo-Platonic physical theory. According to a late and probably exaggerated story, Plato set down conditions for astronomical theory (geocentric, circular motions, and uniform motions.

347 Plato dies. Speusippus, Plato's nephew heads school. Speusippus is the real father of late Pythagoreanism. Aristotle leaves the Academy

(344-343) Aristotle studies marine biology in a lagoon near Mytilene on the island of Lesbos.

(350-330) Calippus gets better values for the lengths of seasons, improves moderately the concentric system of Eudoxus for modeling planetary movement. Aristotle gives measurement for the earth.

343/2-340 Aristotle tutors Alexander of Macedon (the one who will become great)

339 Death of Speusippus. Xenocrates heads the school until his death in 314.

338 Battle of Chaeronea with defeat of Athens and domination of Macedonia in Greek politics.

336 Alexander succeeds to throne of Macedonia.

335/4 Aristotle returns to Athens. He starts teaching in the Lyceum (school lasts to 2nd cent. BCE).

334 Alexander invades Asia.

331 'Liberation' of Egypt from Persian rule and annexation by Alexander. Founding of Alexandria in Egypt and beginning of Greek rule, which lasts to the death of Cleopatra (30 BCE).

323 Death of Alexander. Revolt in Athens against Macedonian domination. Theophrastus (c. 370-288/5) of Eresos (Lesbos) becomes head of Aristotle's school.

322 Aristotle dies in Chalcis.

late 4th cent. Eudemus of Rhodes (a follower of Aristotle) wrote a history of geometry, a history of astronomy, and a history of physical theories. Theophrastics also wrote a history of physical theories. These may have formed the basis for later interpretations of early Greek physical theory.

(300) Euclid published the Elements, a sort of introduction and compendium of formal mathematics, which serves as a kind of toolbox for later mathematicians. Autolycus and Euclid published works on the geometry of motions of celestial spheres.

early 3rd. Aristarchus of Samos is famous for a heliocentric model of the universe, with a rotating earth to account for day and night and measured the distance of the sun and moon (good geometry, but idealized values)

(284) Founding of library and museum at Alexandria. The museum was a research institution in all subjects. The last known head was Theon (died circa 400 CE), but its institutions persisted in one form or another until the Arab conquest.

(280) Eratosthenes measured the earth, by using a summer solstice (good theory, good results, but the input values are idealized, hence good luck)

3rd-1st cent. Development of four major schools: Academic Skeptics (because they take over the Academy), Epicureans, Stoics, and Cynics (of less historical importance).

287-212 Archimedes of Syracuse, the greatest mathematician of the ancient world. His work covers studies of volumes and surface areas, the balance, specific gravity, measurement of the heavens, etc.

212 Roman conquest of Sicily. This marks the completion of Roman domination in western Magna Graeca. Archimedes was murdered in the sack of the city.

ca. 200 Apollonius of Perga, who wrote an extensive study of conic sections, but also did the earliest known work on epicycle and eccentric planetary theories.

(190-126-) Hipparchus, the astonomer and mathematician, invented trigonometry, and made careful observations, which he combines with the observations going back to Nabonasar. He discovered the precession of the equinoxes by using 160 year old observations of Spica, and developed techniques for measuring distances to the moon and sun. He showed the equivalence of the homocentric spherical system and the epicyclic system for the sun.

(150) Seleucus of Seleuceia on the Tigris, Chaldaean astronomer, supposedly sole supporter of Aristarchus on heliocentricity, and wrote on tides.

ca. 90 Posidonius, an eclectic, but principally Stoic philosopher, wrote on almost everything. He also measured the earth using Canopus.

86 With discovery of Aristotelian manuscripts after Sulla's sack of Athens (apocryphal?), Andronicus edits Aristotle and Aristotelian revival begins. Voluminous commentaries are written.

30 BCE Death of Cleopatra and completion of Roman domination over eastern Magna Graeca.

1st BCE-3rd C.E. Pythagorean revival and Middle Platonism

---C.E.------C.E.------C.E.------C.E.------C.E.------C.E.------C.E.------C.E.------C.E.------C.E.------C.E.------C.E.

1st-2nd Hero of Alexandria, most important for his works on the five kinds of machines.

(127-148) Claudius Ptolemaeus, who wrote the Almagest, the big book on astronomy until Copernicus and Kepler. This elaborates the epicyclic theory of planetary motions and introduces equants. Ptolemy also wrote books on epistemology, optics, and astrology.

129-(199) Galen of Pergamon, most influential of Greek medical writers.

c. 205 Alexander of Aphrodisias, the greatest of the commentators on Aristotle.

3rd cent- Neo-Platonism, commentaries on Plato (often allegorical) and on Aristotle (often attempts to reconcile Plato and Aristotle). These commentaries are really philosophical treatises using Plato and Aristotle as ground texts for expositions of the authors' views (which are supposed to be compatible with Plato). Criticisms of Aristotelian kinematics in John Philoponus (John the Workaholic), 6th cent. Simplicius attacks Philoponus and defends a hybrid of neo-Platonism and Aristotelianism.

3rd cent.? Diophantus wrote a book on number theory, which is heavily influenced by Babylonian algebra, but forms in many ways the foundation of Medieval algebra (e.g. in the use of unknowns).

3rd.-5th cent. The great commentators on Greek mathematics and astronomy include Pappus of Alexandria, Theon of Alexandria, his daughter Hypatia, and Eutocius. Besides editing texts that form the basis of modern editions, they wrote extensive commentaries on Euclid, Archimedes, Apollonius, Ptolemy.

529 Justinian closes the Academy. The Neoplatonic commentary tradition continues to the end of the century (especially Simplicius), but not within a pagan school.

(fl. 813-833) al-Kwârismi introduces Hindu number system into the Arab world, but is more famous for his work on algebra (little actually original, but very influential)

8th- 9th cent. Aristotle translated into Arabic and second great age of Aristotelian commentary begins and lasts until 17th cent.. These include: in the Muslim world: Alfarabi, Avicenna, Averroes; in the Jewish world: Moses Maimonides and Gersonides; in the Christian world: Thomas Aquinas.

9th -11th cnt. Important modifications of Ptolemy's theories of precession and the sun, e.g. Thâbit ibn Qurra (836-901) and az-Zarqâl (d. 1100)

10th cent. Most Greek manuscripts go back to copies made in this century. The style of writing had changed and new editions were copied in the new writing style (called miniscule)

(965-1059) Alhazen (ibn al-Haitham) wrote many works, but his work on optics is most influential.

12th-16th Translations of Greek works into Latin, in the 12th from Arabic and Hebrew translations, later directly from Greek.

1229 Founding of Marâgha observatory in northern Iran. The school used techniques, e.g. for eliminating the equant, which were later adopted by Copernicus to his heliocentric theory.

(1225)-1274 Thomas Aquinas, the most important of the Christian synthesizers of Aristotle (whom he knew in the literal translations of William of Moerbecke) and Christian theology.

1300-1350 Merton Calculators (William of Heytesbury, Roger Swineshead, Thomas Bradwardine), building on scholastic notions of uniform change develop kinematics of difform motion and strart basic principles of falling through a vacuum (possibly anticipated by John Philoponus). Their work is continued in Paris by Nicolas Oresme (ca. 1325-1382).