1. Mathematicians: Pythagoras of Samos and his school; Eudoxus of Cnidus; Euclid of Alexandria; Eratosthenes of Cyrene; Hipparchus of Nicaea; Hero of Alexandria; Hypatia of Alexandria; Ptolemy of Alexandria; Archimedes of Syracuse; Apollonius of Perga; Diophantus of Alexandria; Brahmagupta; Aryabhata; Bhaskara I and Bhaskara II; Al-Khwarizmi; Omar Khayyam; Thabit ibn Qurra; Ulugh Beg; Leonardo of Pisa; Nicholas of Oresme.

2. Development of mathematical concepts: zero, algebra, infinity, logical proof, conic sections, method of exhaustion, irrational numbers, $\pi$, infinite series, Fibonacci numbers, golden ratio, trigonometry.

3. Development of mathematical notations and instruments: quipu, abacus, astrolabe, Antikythera device, “Hindu reckoning” (the arithmetic operations we use today), symbols for familiar operations (plus, minus, etc.), dioptra.

4. Applications of mathematics to: architecture, art, astronomy, commerce, geography, music, war.

5. Mathematical puzzles: variations on “As I was going to St. Ives . . .”, the lifespan of Diophantus, the Lilavati, magic squares, sketching and combinatorial problems, logic puzzles.

6. Famous problems: squaring the circle, trisecting the angle, doubling the cube, solving the cubic (achieved around 1500), constructing regular polygons of $n$ sides, characterizing the completely regular (Platonic) solids, proving irrationality of roots.

7. Philosophy of mathematics: the nature of mathematical truth and “reality” (Plato, Aristotle), paradoxes of the infinite and the continuum (Zeno of Elea).

Remember: these are only suggestions.