

"NOTA" means **none of the above**.

- The traditional Chinese-Japanese numeral system is a multiplicative system of base
A. 5 B. 10 C. 6 D. 6 E. NOTA
- Perhaps the earliest mechanical computing device used by man, it derives its name from the Greek word for *sand tray*.
A. abacus B. palimpsest C. papyrus D. vellum E. NOTA
- The division of the circumference of a circle into 360 parts is attributed to the
A. Greeks B. Chinese C. Egyptians D. Babylonians E. NOTA
- A rich primary source of ancient Egyptian mathematics, describing methods of multiplying and dividing, use of unit fractions, and finding the area of a circle is called
A. Moscow papyrus B. Rhind papyrus C. Plimpton 322 D. Rollin papyrus E. NOTA
- Born around 572 B.C. on the Aegean island of Samos, he migrated to the Greek city of Crotona in southern Italy. There he founded a famous school where its members studied philosophy, mathematics and natural science and developed a secret brotherhood.
A. Thales B. Euclid C. Proclus D. Pythagoras E. NOTA
- The number of so-called Platonic solids is
A. 5 B. 4 C. 6 D. 8 E. NOTA
- The following are all names for paradoxes proposed by Zeno, **except**
A. The Dichotomy B. The Barber C. The Arrow D. The Stadium
E. NOTA
- This Greek mathematician was born in Cnidos in Asia Minor around 408 B.C., studied under Archytas and among his contributions are: a new theory of proportions, introduction of the notation of magnitude and the method of exhaustion.

9. This mathematician/philosopher was a pupil of Plato and tutor of Alexander the Great. He founded his own school and while he did not contribute significant new results in mathematics, his -perhaps-greatest contribution was the founding of the science of logic.

- A. Proclus B. Aristotle C. Eudoxus D. Euclid E. NOTA

10. Number of books contained in Euclid's *Elements*

- A. 10 B. 15 C. 8 D. 20 E. NOTA

11. Book V of Euclid's *Elements* is generally considered as the greatest achievement in Euclidian geometry. It deals with

- A. The Theory of Proportions B. Circles and their Parts C. Similarity
D. Theory of Numbers E. NOTA

12. Born in Perga, Asia Minor, he moved to Alexandria in his youth and became associated with the great mathematicians who worked there. He is known as *The Great Geometer*.

- A. Pappus B. Heron C. Thales D. Apollonius E. NOTA

13. The son of an astronomer, born in Syracuse, Sicily, he came to Alexandria when young and received his education there. He invented a pump for raising water from a river, demonstrated how to use the lever to move great weights, and invented engines and catapults to protect Syracuse from invaders. Eureka, he was a genius!

- A. Erastosthenes B. Archimedes C. Hipparchus D. Diophantus
E. NOTA

14. *On the Equilibrium of Planes*, *On the Sphere and Cylinder*, *Quadrature of the Parabola*, and *On Spirals* were all written by

- A. Pythagoras B. Heron C. Nicomedes D. Archimedes E. NOTA

15. Trigonometry was first introduced in a spherical context due to a desire to predict the paths and position of heavenly bodies and to aid in the telling of time, navigation, and calendar-reckoning. The chief creators were all of the following members of the Alexandrian school **except**

A. Diocles B. Hipparchus C. Menelaus D. Ptolemy E. NOTA

16. By the end of the first millenium, Latin was the language of educated Europeans and that of mathematics and science. Most of the knowledge obtained then came from Roman books and was scant. An important translator of Greek books produced works like *Institutis Arithmetica*, a translation of Nichodemus, and *Consolations of Philosophy*, widely used until the twelfth century. He was

A. Alcuin B. Anicius C. Aurelius D. Bede the E. NOTA
of York Boethius Cassiodorus Venerable

17. Though mathematical material was scanty at best, mathematics was an important part of the medieval curriculum in Europe for all of the following reasons, **except**

A. Mathematics was considered a good training for theological reasoning.

B. Applications to the calendar.

C. The development of astrology, which was considered linked to medicine.

D. Taxation of the serfs. E. NOTA

18. Known as Doctor Mirabilis, he lived from 1214 to 1294 and had enormous knowledge of languages and the sciences of the times. In his *Opus Majus*, he forcibly proposes that mathematics is the basis for science, chronology, music and much more.

A. Bernard B. Robert C. Roger D. William of
Sylvester Grosseteste Bacon Ockham

E. NOTA

19. Nicholas Copernicus and Johannes Kepler are famous for their work in
A. Trigonometry B. Geometry C. Algebra D. Astronomy E. NOTA
20. Born in Pisa c. 1170, educated in Africa and widely traveled, he published his majestic *Liber Abaci* in 1202, a free rendition of Arabic and Greek materials into Latin which taught Hindu methods of calculations with integers and fractions, square roots and cubic roots.
A. Oresme B. Fibonacci C. Nemoraius D. Galileo E. NOTA
21. Born in 1512, he dedicated his life to map-making. In 1569 he published a map using the Mercator projection. In it lines of latitude and longitude are straight but the spacing between latitude lines is increased. Thus he kept the ratio of a length one minute of longitude to one minute of latitude correct.
A. Johannes Kepler B. Luca Pacioli C. Paolo Uccello D. Galileo Galilei E. NOTA
22. Known in Sanskrit as *sunya*, in Arabic as *sifr*, in Latin as *zephirum*, the present-day zero originated in
A. India B. Babylonia C. China D. Persia E. NOTA
23. His *Conic Sections*, eight books containing about 400 propositions, completely superseded earlier works.
A. Eratosthenes B. Menaechmus C. Euclid D. Apollonius E. NOTA
24. The creation of a positional decimal numeral system, the finding of a precise value of π , acknowledgement of negative numbers, employment of matrix methods in the solution of linear equations are a few of the advances made by the ancient peoples of
A. India B. Persia C. Greece D. China E. NOTA

25. Born in Pavia in 1501, his greatest work is his *Ars Magna*, the first Latin treatise devoted solely to algebra. In it notice is given to negative roots and computation with imaginary numbers.

- A. Girolamo Cardano B. Nicolo Fontana C. Ludovico Ferrari D. Paola Ruffini E. NOTA

26. He was, perhaps, the greatest French mathematician of the 16th century. Born in 1540 he wrote works in trigonometry, algebra and geometry. In these he developed methods of solving plane and spherical triangles with the aid of all six trigonometric functions. His *In Artem* did much for the development of symbolic algebra and his *De Numerosa* gives a systematic process used until the late 1600's for approximating the root of an equation.

- A. Bachet de Meziriac B. Francois Viete C. Thomas Harrot D. Augustus de Morgan E. NOTA

27. The Pythagoreans produced many achievements. The following are some of these, **except**

- A. They found a formula giving perfect numbers.
B. They discovered that $\sqrt{2}$ is not rational.
C. They examined the relationships between the arithmetic, geometric, and harmonic means.
D. They approximated π to 5 significant figures.
E. NOTA

28. Euclid's *Elements* begin with a list of 23 definitions. The following are all his definitions, **except**

- A. A point is that which has no parts.
B. A line is length without width.
C. The extremities of a line are points.
D. A straight line is a line which lies evenly with the points on itself.
E. NOTA

29. Known as *Beta* to his students, he was the chief librarian in Alexandria. He was a philosopher, poet, historian, astronomer, and mathematician. He invented the Julian calendar and his greatest achievement was a remarkably accurate calculation of the circumference of the earth.

A. Archimedes B. Eudoxus C. Eratosthenes D. Hippias E. NOTA

30. This Hindu mathematician studied Diophantine equations, calculated

the surface area and volume of pyramids and cones using $\frac{22}{7}$ as an approximation for π . He also discovered the formula for the area of a cyclic quadrilateral, a generalization of Heron's formula.

A. Bhaskara B. Aryabhata

C. Mahavira

D. Brahmagupta

E. NOTA
