

NOTE: (ca.---) means circa. NOTA means "None Of These Answers."

1. A noted mathematician as well as theologian this man was known as 'The Profound Doctor.' His works included *De proportionibus velocitatum in motibus* (1328) as well as *On insolubles*. He was also the first mathematician to study "star polygons," although Kepler did further observations later. His book *On Insolubles* discusses logical problems such as, "I am telling lie."

A) NEWTON B) BRADWARDINE C) RECORDE D) TARTAGLIA E) NOTA

2. This mathematician used his knowledge of probabilities to aid in his gambling habit. Other than cards, chess and dice, cubic and quartic equations interested him. In 1545, he published *Ars Magna*, which included methods of solutions for these equations.

A) PASCAL B) FERMAT C) VIETE D) CARDANO E) NOTA

3. A literal translation of this mathematicians name is "Tent Maker", which is the presumed occupation of his father, Ibrahim. However, this man did not follow in his father's footsteps, mathematics interested him much more. He published *Treatise on Demonstration of Problems of Algebra* that completely classified cubic equations with solutions found my intersection conic sections. Other than mathematics, this man was a poet. He wrote nearly 600 poems, all of four lines. His best known is the following:

The Moving Finger writes, and, having writ,
Moves on: nor all thy Piety nor Wit
Shall lure it back to cancel half a Line,
Nor all thy Tears wash out a Word of it.

A) KHAYYAM B) AL-JABAR C) BHASKARA D) BRAMAGUPTA E) NOTA

4. Born to the Astronomer Pheidias in Syracuse, Italy, this man was one of the greatest mechanical geniuses of all time. Some of his books included *On the sphere and cylinder*, and *On the sphere and cylinder*. This man died at the age of 75 in 212 BC during the capture of Syracuse by the Romans in the Second Punic War.

A) APOLLONIUS B) ARCHIMEDES C) PYTHAGORAS D) PTOLEMY E) NOTA

5. There are three classical problems in Greek mathematics, which of the following are included?

I. Squaring the Circle II. Bisection of an angle III. Duplication of a cube

IV. Archimedes' Screw

A) I, II & II B) III & IV C) I and III D) III ONLY E) NOTA

6. Sometimes called the founder of mechanics, this man (c. 428 –350 B.C.) was said to invent a children’s rattle and a mechanical bird. This man was a strong follower of the Pythagorean thought, believing that an understanding of mathematics would lead to understanding everything. This man is also responsible for changing the Sub-contrary Mean to the Harmonic Mean.

- A) ARCHIMEDES B) EUDOXUS C) APOLLONIUS D) ARCHYTAS E) NOTA

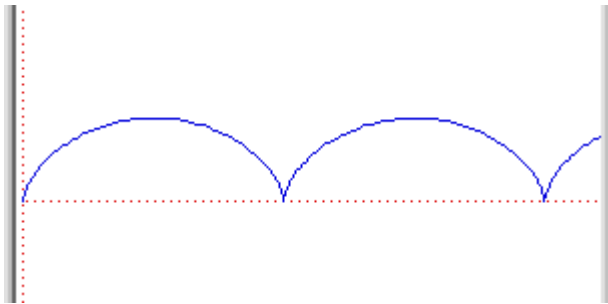
7. Born around 598, this mathematician penned two books, *Brahmasphutasiddhanta* (The Opening of the Universe), and *Khandakhadyaka*. In *Brahmasphutasiddhanta*, this man defined zero, stating that it was the result of subtracting a number from itself. This man also set up a number of arithmetical rules such as “The product of two positive numbers is a positive number,” and “The product of a negative number and a positive number is a negative number.”

- A) BHASKARA B) RAMANUJAN C) KHAYYAM D) BRAHMAGUPTA E) NOTA

8. This Greek astronomer earned his mark in history for, among other things, taking the Earth out of the center of the universe. His most famous book, *The Almagest* gives the mathematical details of the motions of the sun, moon and earth. This man’s astronomical model was used, until Copernicus’ *De Revolutionibus*, in 1543, 1378 years after his death.

- A) THALES B) PTOLEMY C) PARMENIDES D) MENELAUS E) NOTA

9. Perhaps the most studied curve in the History of Mathematics, what is the name of this curve?



- A) WITCH CURVE B) ARCHIMEDES SPIRAL C) NEWTON’S CURVE D) CYCLOID E) NOTA

10. Name this famous mathematician, who lived from 1571 to 1630.

A) STEINER B) JACOBI C) CARDANO D) KEPLER E) NOTA

11. Famous for inventing the equals sign, this man was also the physician to King Edward VI and Queen Mary. He is also credited with the introduction of Algebra to England.

A) RECORDE B) VIETE C) WIDMANN D) HARDY E) NOTA

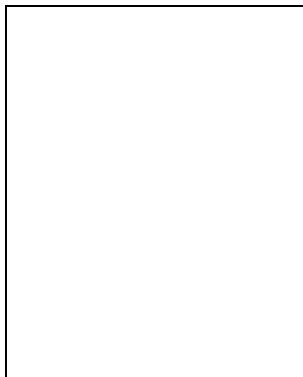
12. This mathematician's life was haunted by the death of his wife, the imprisonment and execution of one son, the banishment of his other son from Bologna, and his imprisonment for heresy. His death came at his own hands, to prove himself correct in figuring out the most probable day of his death.

A) GALLILEO B) TARTAGLIA C) CARDANO D) NAPIER E) NOTA

13. This Scottish mathematician was born in 1550, found it hard to find the time for the necessary calculations between working on theology. He is best known, however, for his invention of logarithms and the development of [His] Bones.

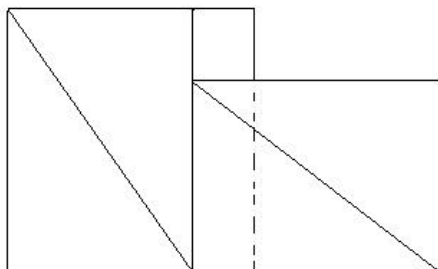
A) NAPIER B) O'LEARY C) DEDIKIND D) MACLAUREN E) NOTA

14. Please identify this Italian thinker who lived from 1564-1642.



A) CARDANO B) VIETE C) BERNOULLI D) GALILEO E) NOTA

15. What is the following diagram considered a proof for (Figure not drawn to scale).



A) GOLDEN RATIO B) PYTHAGOREAN THEOREM C) LAW OF SINES D) LAW OF COSINES E) NOTA

16. Better known as Regiomontanus, a Latin version of his real name, this mathematician was a student of Peurbach's and interested in the works of Ptolemy. He also published *De triangulis omnimodis* (1464), which was a study on solving triangles. Pope Sixus IV requested that he become the Bishop of Regensburg, however he died before he could hold this title. What was this man's real name?

A) RECORDE B) MULLER C) CARDANO D) BERNOULLI E) NOTA

17. The four conic sections can be represented by passing a plane, at various angles, through a cone. Who was the first recorded man to define these curves?

A) APOLLONIUS B) THALES C) EUDOXUS D) EUCLID E) NOTA

18. How many books were included in Euclid's *The Elements*?

A) 13 B) 2 C) 5 D) 7 E) NOTA

19. Whose death marks the end of the Golden Age of Mathematics in Greece?

A) THALES B) EUCLID C) APOLLONIUS D) ARCHIMEDES E) NOTA

20. Author of *The Collection*, this man is more famous for his theorem for the volume of a revolved area. Name this mathematician.

A) APOLLONIUS B) PAPPUS C) EUCLID D) ZENO E) NOTA

21. This Alexandrian was completely devoted to algebra. His main works are 6 of the 13 books forming the *Arithmetica*. It was said, "His boyhood lasted $\frac{1}{6}$ of his life, his beard grew after $\frac{1}{12}$ more, he married after $\frac{1}{7}$ more, his son lived to half of his father's age, and the father died 4 years after his son." Who is this mathematician?

A) ARCHIMEDES B) TARTAGLIA C) GAUSS D) DIOPHANTUS E) NOTA

22. How many years did the mathematician mentioned in the above question actually live?

A) 80 B) 84 C) 88 D) 76 E) NOTA

23. Niccolo Fontana (1500-1557) got his nickname because he stammered. He suffered a serious head wound as a child that affected his speech. Completely poverty stricken, Fontana used tombstones as slates while growing up. He became the first man to apply mathematics to military problems involving artillery. What was Fontana's famous nickname?

A) THE STUTERER B) TARTAGLIA C) FIBONACCIA D) TRUMPER E) NOTA

24. Due to the established timeline of this test, there is only one question I can ask you of Descartes. When was René Descartes born?

A) 1594 B) 1596 C) 1599 D) 1600 E) NOTA

25. Named after the Englishman who bought it, the papyrus written by Ahmes was titled, “Directions for Knowing all Dark Things.” It is a collection of geometry and arithmetic problems. What is this papyrus now known as?

A) MOSCOW PAPYRUS B) CHAMPLAIN PAPYRUS C) RHIND PAPYRUS D) LILTE PAPYRUS E)NOTA

26. Which one of these fractions is NOT considered to be an “Egyptian Fraction?”

A) $\frac{1}{2}$ B) $\frac{1}{3}$ C) $\frac{2}{3}$ D) $\frac{1}{4}$ E) NOTA

27. Who first used the sexagesimal system of numbers?

A) BABYLONIANS B) EGYPTIANTS C) CHINESE D) ARABIANS

28. A Chinese mathematician and astronomer, he gave the rational approximation $\frac{355}{113}$ to π , which is correct to 6 decimal places.

A) TSU CH’UNG CHI B) SHEN KUA C) CHU SHIH-CHIEH D) ZHANG HENG E) NOTA

29. What are the first four triangular numbers?

A) 3,6,10,15 B) 1,3,6,9 C) 3,6,9,12 D) 1,3,6,10 E) NOTA

30. Born Leonardo de Pisa (ca. 1180-1250), this mathematician wrote *Liber Abaci*. He is also famous for the following problem:

How many pairs of rabbits will be produced in a year, beginning with a single pair, if every month each pair bears a new pair which becomes productive from the second month on?

What is this man’s better known name?

A) TARTAGLIA B) FIBONACCI C) CAVALIERI D) TAYLOR E) NOTA

