

Famous Math Quotes

Greek and Early European

1. "Geometry existed before creation." -- Plato
2. "God forever geometrizes." -- Plato
3. "Let no one ignorant of geometry enter here." -- inscription above Plato's Academy
4. "Wherever there is number, there is beauty." -- Proclus
5. "There is no royal road to geometry." -- Euclid
6. "[Paradoxes of the infinite arise] only when we attempt, with our finite minds, to discuss the infinite, assigning to it those properties which we give to the finite and limited." -- Galileo
7. "The book of nature is written in the language of mathematics." -- Galileo
8. "The merit of painting lies in the exactness of reproduction. Painting is a science and all sciences are based on mathematics. No human inquiry can be a science unless it pursues its path through mathematical exposition and demonstration." -- Leonardo Da Vinci
9. "With me, everything turns into mathematics." -- Descartes
10. "I have discovered a truly marvelous proof of this, which however the margin is not large enough to contain." -- Pierre de Fermat (referring to his "last theorem")

Modern

11. "Besides language and music, mathematics is one of the primary manifestations of the free creative power of the human mind." -- Hermann Weyl
12. "Mathematics is the Queen of the Sciences." -- Carl Friedrich Gauss
13. "Projective geometry is all geometry." -- Arthur Cayley
14. "But of all the sciences cultivated by mankind, none are more useful than mathematics, to call forth a spirit of enterprise and enquiry." -- Consider Sterry
15. "The whole of mathematics consists in the organization of a series of aids to the imagination in the process of reasoning." -- Alfred North Whitehead
16. "The advancement and perfection of mathematics are intimately connected with the prosperity of the State." -- Napoleon
17. "A mathematician who is not also something of a poet will never be a complete mathematician." -- Karl Weierstrass
18. "The mathematician does not study pure mathematics because it is useful; he studies it because he delights in it and he delights in it because it is beautiful." -- Henri Poincare
19. "We know that God exists because mathematics is consistent and we know that the devil exists because we cannot prove the consistency." -- Andre Weil
20. "The essence of mathematics is in its freedom." -- Georg Cantor
21. "Pure mathematics is, in its way, the poetry of logical ideas." -- Albert Einstein
22. "Do not worry too much about your difficulties in mathematics, I can assure you that mine are still greater." -- Albert Einstein
23. "How can it be that mathematics, a product of human thought independent of experience, is so admirably adapted to the objects of reality?" -- Albert Einstein
24. "The moving power of mathematical invention is not reasoning but imagination." -- Augustus de Morgan
25. "All mathematicians share ... a sense of amazement over the infinite depth and the mysterious beauty and usefulness of mathematics." -- Martin Gardner
26. "Fear it no less than the sensual passions because it, too, may take up all your time and deprive you of your health, peace of mind, and happiness. For God's sake, please give it up." -- Wolfgang Farkas Bolyai's advice in a letter (ca. 1830) to his son, Janos Bolyai, who was in the process of discovering non-Euclidean geometry.
27. "Out of Nothing, I have created a strange new universe." -- Janos Bolyai, speaking of his discovery of a non-Euclidean geometry.

28. "There are 10 types of people in the world -- Those who understand binary, and those who don't."
29. "The lottery is a tax on people who are bad at math."
30. "Mathematics is a body of knowledge, but it contains no truths." -- Morris Kline
31. "Mathematics, rightly viewed, possesses not only truth, but supreme beauty." -- Bertrand Russell
32. "Mathematics takes us still further from what is human, into the region of absolute necessity, to which not only the actual world, but every possible world, must conform." -- Bertrand Russell
33. "Math is the subject in which we never know what we are talking about, nor whether what we are saying is true." -- Bertrand Russell
34. "Beauty is the first test; there is no permanent place in the world for ugly mathematics." -- Godfrey Harold Hardy, *A Mathematician's Apology* (1940)
35. "The study of mathematics is apt to commence in disappointment." -- Alfred North Whitehead
36. "Numbers are the free creation of the human mind." -- Richard Dedekind
37. "Before beginning [to try to prove Fermat's Last Theorem] I should have to put in three years of intensive study, and I haven't that much time to squander on a probable failure." -- David Hilbert
38. "The Good Lord made all the integers; the rest is man's doing." -- Leopold Kronecker
39. "A man is like a fraction whose numerator is what he is and whose denominator is what he thinks of himself. The larger the denominator, the smaller the fraction." -- Tolstoy
40. "In the fall of 1972, President Nixon announced that the rate of increase of inflation was decreasing. This was the first time a president used the third derivative to advance his case for reelection." -- Hugo Rossi
41. "If men had known how to permeate the soul with mathematics in the right way in the arithmetic lessons during these past years, we should not now have Bolshevism in Eastern Europe." --Rudolf Steiner (from a lecture given in Oxford, August 1922)
42. "The student of mathematics must get rid of all arbitrary thinking and follow purely the demands of thought. In thinking in this way, the laws of the spiritual world flow into him. This regulated thinking leads to the most spiritual truths." -- Rudolf Steiner
43. "Mathematics is a practical field in that it serves to free the students from the bonds of authority." -- from *Finding the Path* by Bengt Ulin
44. "Mathematics is the music of reason." -- from *A Mathematician's Lament* by Paul Lockhart
45. "To do mathematics is to engage in an act of discovery and conjecture, intuition and inspiration; to be in a state of confusion -- not because it makes no sense to you, but because you gave it sense and you still don't understand what your creation is up to." -- Paul Lockhart
46. "Mathematics is one of the surest ways for a man to feel the power of thought and the magic of the spirit. Mathematics is one of the eternal truths and, as such, raises the spirit to the same level on which we feel the presence of God." -- from *The Man Who Counted* by Malba Tahan

On Education and Life

47. "He who asks a question is a fool for five minutes; he who does not ask a question remains a fool forever." -- Confucius
48. "When I get a little money, I buy books and if any is left, I buy food and clothes." -- Erasmus
49. "The length of your education is less important than its breadth, and the length of your life is less important than its depth." -- Marilyn vos Savant
50. "Your work is to discover your work and then with all your heart to give yourself to it." -- Buddha
51. "The world is not given to you by your parents." It is loaned to you by your children. -- Kenyan proverb
52. "A mind is a fire to be kindled, not a vessel to be filled." -- Plutarch
53. "It is not enough to have a good mind." The main thing is to use it well. -- René Descartes
54. "The more you know, the less sure you are." -- Voltaire
55. "The greater our knowledge increases, the greater our ignorance unfolds." -- John F. Kennedy
56. "Imagination is more important than knowledge. Knowledge is limited; imagination encircles the world." -- Albert Einstein
57. "Everything that is really great and inspiring is created by the individual who can labor in freedom." -- Albert Einstein
58. "Science without religion is lame; religion without science is blind." -- Albert Einstein
59. "Nothing was ever achieved without enthusiasm." - Emerson

60. "Learning without thought is labor lost; thought without learning is perilous." -- Confucius
61. "True pleasure lies not in the discovery of truth, but in the search for it." -- Tolstoy
62. "God grant me the serenity to accept the things I cannot change, the courage to change the things I can, and the wisdom to know the difference." -- Reinhold Niebuhr
63. "When you are courting a nice girl an hour seems like a second. When you sit on a red-hot cinder a second seems like an hour. That's relativity." -- Albert Einstein
64. "The most beautiful thing we can experience is the mysterious. It is the source of all true art and science." -- Albert Einstein
65. "It is the supreme art of the teacher to awaken joy in creative expression and knowledge." -- Albert Einstein
66. "I have no particular talent." I am only inquisitive. -- Albert Einstein
67. "The value of an education is not the learning of many facts but the training of the mind to think something that cannot be learned from textbooks." -- Albert Einstein
68. "God does not play dice with the universe." -- Albert Einstein
69. "God not only plays dice. He also sometimes throws the dice where they cannot be seen." -- Stephen Hawking
70. "Black holes are where God divided by zero." -- Steven Wright
71. "When I was a boy of fourteen, my father was so ignorant I could hardly stand to have the old man around. But when I got to be twenty-one, I was astonished by how much he'd learned in seven years." -- Mark Twain
72. "Whenever I get gloomy with the state of the world, I think about the arrivals gate at Heathrow Airport. General opinion's starting to make out that we live in a world of hatred and greed, but I don't see that. It seems to me that love is everywhere. Often it's not particularly dignified or newsworthy, but it's always there - fathers and sons, mothers and daughters, husbands and wives, boyfriends, girlfriends, old friends. When the planes hit the Twin Towers, as far as I know none of the phone calls from the people on board were messages of hate or revenge - they were all messages of love. If you look for it, I've got a sneaky feeling you'll find that love actually is all around." --opening line from the movie *Love Actually*.

Other

From Jurgensen, Brown, and Jurgensen's geometry textbook:

The mathematical education of students at all levels should include information and experiences that will help them appreciate and value the role of mathematics in the development of modern society. Geometry cannot be appreciated without some acquaintance with the history of the subject. The general aims can be as follows:

- *To make the students aware of the empirical basis of geometry before the time of Euclid.*
- *To show Euclid as an organizer and codifier of the math of his time.*
- *To study Descartes and the significance of analytical geometry.*
- *To study Bolyai and Lobachevsky and the importance of non-Euclidean geometry.*

From *The Man Who Counted* (Malba Tahan, 1993, p97-98):

"Mathematics arose from the awakening of the human soul. The mathematician does not look for truth with a practical purpose. To cultivate mathematics only for its practical purpose is to despoil the soul of mathematics. The theory that we study today, and that appears to us impractical, might have implications in the future that are unimaginable to us. Who can imagine the repercussions of an enigma through the centuries?

Mathematics is one of the surest ways for a man to feel the power of thought and the magic of the spirit. Mathematics is one of the eternal truths and, as such, raises the spirit to the same level on which we feel the presence of God... Without dreams or imagination, mathematics is impoverished; it is lifeless."