BPS MATH MINUTES   September 2021

Monday (Motivation)	Tuesday (Trivia)	Wednesday (Word of the Day)	Thursday (Truth Tales)	Friday (Fun Facts)
		1 SCD	2 SCD	3 Teacher set-up day
6	7 SCD	8 Add- To combine; put together two or more quantities	8 The word mathematics comes from the Greek word mathema which means learning, study and science.	10 One Googol is the number 1 followed by 100 zeros. The name 'googol' was invented by a child in the 1930s who was asked to think up a name for a very big number.
13 Without mathematics, there's nothing you can do. Everything around you is mathematics. Everything around you is numbers. -Shakuntala Devi	14 Using only addition, how do you add eight 8s and get the number 1000?	15 Area- The number of square units that covers a shape or figure	16 Greek mathematician Euclid is often referred to as the 'Father of Geometry' for his revolutionary ideas and influential textbook called 'Elements' that he wrote around the year 300 BC	17 *Septillion* has 24 zeros
20 We will always have STEM with us. Some things will drop out of the public eye and will go away, but there will always be science, engineering, and technology. And there will always, always be mathematics. --Katherine Johnson	21 What digit occurs the least frequently between the numbers 1 and 1,000?	22 Array- An arrangement of objects, pictures, or numbers in columns and rows	23 Chinese mathematics developed around the 11th century BC and included important concepts related to negative numbers, decimals, algebra and geometry.	24 The word "hundred" comes from the old Norse term, "hundrath," which actually means 120 and not 100
27 Mathematics allows for no hypocrisy and no vagueness. –Stendhal	28 If a hen and a half lay an egg and a half in a day and a half, how many eggs will half a dozen hens lay in half a dozen days?	29 Associative Property- The associative property states that you can add or multiply regardless of how the numbers are grouped.	30 The numerical digits we use today such as 1, 2, and 3 are based on the Hindu-Arabic numeral system developed over 1000 years ago.	

BPS MATH MINUTES   October 2021

Monday (Motivation)	Tuesday (Trivia)	Wednesday (Word of the Day)	Thursday (Truth Tales)	Friday (Fun Facts)
				1 Zero is the only number that can't be represented in Roman numerals, where other numbers are represented with a combination of letters, such as V is 5 and I is one. The letters IV represent 4 or "one before five" and the letters VI represent 6 or "one after five".
4 "Mathematics knows no races or geographic boundaries; for mathematics, the cultural world in one country." – David Hilbert	**5** How many ways can you make change for a dime?	**6** Bar Graph- Used to show comparisons between categories of data. The bars can be either horizontal or vertical. Bar graphs with vertical bars are sometimes called vertical bar graphs	**7** It is believed that ancient Egyptians used complex math such as algebra, arithmetic, and geometry as far back as 3000 BC.	**8** "Forty" is the only number that is spelt with letters arranged in alphabetical order.
11	**12** A store can place 8 large boxes or 10 small boxes into a carton for shipping. In one shipment, there are a total of 96 boxes. If there are more large boxes than small boxes, how many cartons were shipped?	**13** Circle- A round shaped figure that has no corners or edges	**14** Babylonians measured the circumference of a circle as approximately 3 times the diameter, which is fairly close to today's measurement which uses the value of Pi (around 3.14)	**15** From 0 to 1000, the only number that has the letter "a" in it is "one thousand".
18 "Just because we can't find a solution, it doesn't mean there isn't one." – Andrew Wiles	**19** I am an odd number. Take away one letter and I become even. What number am I?	**20** Coefficient- A number placed before and multiplying the variable in an algebraic expression (e.g. 4 in 4x)	**21** Brahmagupta, an Indian mathematician, was the first to show that subtracting a number from itself gives zero and means having no value or "sunya."	**22** A 'jiffy' is an actual unit of time. It means about 1/100th of a second, but the measurement varies slightly around the world.
25 "Math is like going to the gym for your brain. It sharpens your mind." – Danica McKellar	**26** Sally is 54 years old and her mother is 80, how many years ago was Sally's mother three times her age?	**27** Centimeter- A metric unit for measuring length, equal to one hundredth of a meter	**28** Graphs originated from ancient astronomers drawing positions of stars. Roman surveyors used coordinates to locate landmarks on their maps.	**29** The symbol for division (i.e.,÷) is called an obelus (aa-buh-lus).

BPS MATH MINUTES

November 2021

1 "Life is a math equation. In order to gain the most, you have to know how to convert the negatives into positives." – Anonymous	**2**	**3** Difference- The result of subtracting one number from another	**4** Ancient Babylonians used base 60 instead of 10 to solve math, therefore we have 60 seconds in 1 minute, 60 minutes in an hour, and 360 degrees in a circle.	**5** If you add two even numbers together, you always get an even number. Can you create your own math sentence to prove this?
8 "The essence of mathematics is not to make simple things complicated but to make complicated things simple." – Stan Gudder	**9** Which 3 whole numbers have the same product and sum?	**10** Data- Information collected and used to analyze a specific concept or situation.	**11**	**12** If you add an even number and an odd number, you always get an odd number. Can you create your own math sentence to prove this?
15 "The only way to learn mathematics is to do mathematics." – Paul Halmos	**16** How do you go from 98 to 720 using just one letter?	**17** Denominator- The number below the line in a common fraction; a divisor. Shows how many equal parts the item is divided into	**18** Pachisi is a hugely popular game in India dating back centuries, IT is played on a board onto which a player throws several cowry shells. Its name translates in Hindi to "Twenty-Five," which refers to the largest score that can be earned through the toss of the shells.	**19** A baseball diamond is a perfect rhombus.
22 "Success is the sum of small efforts, repeated day in and day out." – Robert Collier	**23** There is a basket containing 5 apples. How do you divide the apples among 5 children so that each child has 1 apple while 1 apple remains in the basket?	**24** Dividend- The amount that you want to divide up. dividend ÷ divisor = quotient. Example: in 12 ÷ 3 = 4, 12 is the dividend	**25**	**26**
29 "Math is not a spectator sport. It's not a body of knowledge, it's not symbols on a page. It's something you play with, something you do." – Keith Devlin	**30** There is a three-digit number. The second digit is four times as big as the third digit, while the first digit is three less than the second digit. What is the number?			

BPS MATH MINUTES   December 2021

Monday (Motivation)	Tuesday (Trivia)	Wednesday (Word of the Day)	Thursday (Truth Tales)	Friday (Fun Facts)
		1 Division-Splitting into equal parts or groups. It is the result of "fair sharing."	2 The first woman to study mathematics is Hypatia from Alexandria.	3 Different names for the number 0 include *zero, nought, naught, nil, zilch,* and *zip.*
6 "It's not that I'm so smart; it's just that I stay with problems longer." – Albert Einstein	7 Today's number is 221 Write it.... -in words -five less -twenty more -round to the nearest 10 -next odd	8 Equivalent- Equal in value, amount, function, or meaning	9 In 1489 the plus and minus symbols were printed in Johannes Widmann's Mercantile Arithmetic. After that they became used as the notation for adding and subtracting.	10 The equal sign (=) was invented in 1557 by a Welsh mathematician named Robert Recorde.
13 "We are all wired differently, and we can all do math." – Gina Cherkowski	14 I had a wad of money in my pocket. I gave half away and spent half of what was left. Then I lost $5. That left me with just $5. How much did I start with?	15 Estimate- To find something close to the correct answer; in other words, you are approximating.	16 The oldest mathematical games in the world originated in African regions located south of the Sahara.	17 In 1900, absolutely all mathematical calculations could fit in 80 books. Today, mathematics is so developed that it is unlikely to fit in books that exceed the specified figure by 100 times.
20 "Mathematics is the abstract key which turns the lock of the physical universe." – John Polkinghorne	21 You have two coins that total 30 cents. One is not a nickel. What are the two coins?	22 Fraction- Represents a part of a whole or, more generally, any number of equal parts	23 In India , negative numbers appeared about 620 CE in the work of Brahmagupta (598 - 670) who used the ideas of 'fortunes' and 'debts' for positive and negative. Brahmagupta used a special sign for negatives and stated the rules for dealing with positive and negative quantities as follows: • *A debt minus zero is a debt.* • *A fortune minus zero is a fortune.* • *Zero minus zero is a zero.* • *A debt subtracted from zero is a fortune.* • *A fortune subtracted from zero is a debt.* • *The product of zero multiplied by a debt or fortune is zero.* • *The product of zero multiplied by zero is zero.* • *The product or quotient of two fortunes is one fortune.* • *The product or quotient of two debts is one fortune.* • *The product or quotient of a debt and a fortune is a debt.* • *The product or quotient of a fortune and a debt is a debt.*	24

BPS MATH MINUTES

January 2022

Monday (Motivation)	Tuesday (Trivia)	Wednesday (Word of the Day)	Thursday (Truth Tales)	Friday (Fun Facts)
3 "In mathematics, the art of proposing a question must be held of higher value than solving it." – George Cantor	4 The numbers 1-10 have been listed in order. What has happened to make them be listed this way: 8 5 4 9 1 7 6 10 3 2	5 Hypotenuse- The side opposite the right angle in a right-angled triangle	6 The oldest mathematical artifact, the Lebombo bone, dates back to more than 35,000 years ago. It was found in the Lebombo Mountains near Swaziland.	7 The city of Denver, Colorado, has an elevation of precisely 5,280 feet—that's the length of a mile—which is why Denver is called the "mile high" city.
10 "Mathematics is the music of reason." – James Joseph Sylvester	11 Divide 30 by ½ then add 10. How much do you have?	12 Hexagon- A 6-sided shape also known as a 6-sided polygon	13 Among the mathematical sciences, geometry is the earliest and historically most influential.	14 40 Below Is the only temperature that Is the same in both Fahrenheit and Celsius.
17	18 A clerk at the butcher shop is 6 feet tall and wears size 10 shoes. What does he weigh?	19 Improper fraction- A fraction in which the numerator is greater than the denominator Ex. 12/8 (twelve-eighths)	20 The Yoruba people from present-day Nigeria created their own complex counting system based on units of 20 (instead of 10).	21 An icosagon is a shape with 20 sides.
24 "It's fine to work on any problem, so long as it generates interesting mathematics along the way – even if you don't solve it at the end of the day." – Andrew Wiles	25 A farmer has 19 sheep on his land. One day, a big storm hits and all but seven run away. How many sheep does the farmer have left?	26 Inequality-A statement relating two or more quantities or values that are not equal using words or symbols. Ex. 7 is greater than 6	27 John Urschel is not only famous for his studies in mathematics, but he also played for the Baltimore Ravens!	28 In a room of 23 people there's a 50% chance that two people have the same birthday.
31 "If there is no struggle there is no progress." – Frederick Douglass				

BPS MATH MINUTES

February 2022

Monday (Motivation)	Tuesday (Trivia)	Wednesday (Word of the Day)	Thursday (Truth Tales)	Friday (Fun Facts)
	1 Your sock drawer only contains 18 white socks and 18 blue socks. How many times do you need to reach inside the drawer and take out a sock to guarantee a matching pair?	2 Line graph- A representation used to show change over an interval, with the data points connected by line segments.	3 Geometry and symmetry in repeated patterns can be seen throughout the area south of the Sahara, in forms of artistic designs on houses, gourd, baskets, pipes, and other everyday items.	4 Most mathematical symbols weren't invented until the 16th century. Before that, equations were written in words.
7 "Education is our passport to the future, for tomorrow belongs to the people who prepare for it today." – Malcolm X	8 You planted sunflower seeds in your back garden. Every day, the number of flowers doubles. If it takes 52 days for the flowers to fill the garden, how many days would it take for them to fill half the garden?	9 Mean- A measure of center where the sum of a set number is divided by the number of elements in the set. Ex. Finding the average	10 Certain cultural taboos affect the numerical expression of numbers. For example, the number "7" is tied to the origins of creation and great divinities within the Niger Delta region. Accordingly, to express the number "7," you would say "6+.1."	11 "one" is the only number that is spelt with letters arranged in descending order (z - a)
14 "Do the best you can until you know better. Then when you know better, do better." – Maya Angelou	15 When Ashley was 15, her mother was 37. Now, her mother is twice her age. How old is Ashley?	16 Obtuse angle- An angle whose measure is greater than 90 degrees and less than 180 degrees.	17 Dr. Christine Darden (born 1942) is an African American mathematician, data analyst, and aeronautical engineer who spent her 25-year career at NASA researching sonic booms—the sound associated with the shock wave of an object traveling through air faster than the speed of sound.	18 By analyzing the variation of symmetry in geometric patterns shown on a piece of cloth and other cultural items, it is possible to identify which group of people made it.
21	22	23	24	25
28 "There is a difference between not knowing and not knowing yet." – Shelia Tobias				

BPS MATH MINUTES   March 2022

Monday (Motivation)	Tuesday (Trivia)	Wednesday (Word of the Day)	Thursday (Truth Tales)	Friday (Fun Facts)
	1 If: 2 + 2 = 44 3 + 3 = 96 4 + 4 = 168 5 + 5 = 2510 then: 6 + 6 = ?	2 Odd number- An integer that is not divisible by two Ex. 1, 3, 5, 7…….	3 Archimedes of Syracuse lived around the year 250 BC and among other things, developed a method for determining the volume of objects with irregular shapes.	4 Markings on animal bones indicate that humans have been doing math since around 30,000 B.C.
7 "Education is not the learning of facts but the training of the mind to think." – Albert Einstein	8 Which is heavier, a pound of feathers or a pound of rocks?	9 Order of operations- The sequence in which specific rules of mathematics are performed when evaluating an expression or equations	10 The pi symbol was adopted by Swiss mathematician Robert Euler, in 1737.	11 Pi has 6.4 billion known digits. It would take approximately 133 years for someone to recite the 6.4 billion known digits without stopping.
14 Mathematics is not about numbers, equations, computations, or algorithms: it is about understanding. -William Paul Thurston	15 A duck was given $9, a spider was given $36, a bee was given $27. Based on this information, how much money would be given to a cat?	16 Parallel lines- Lines in the same plane that never intersect	17 Marjorie Lee Browne (1914–1979) was one of the first African-American women to acquire a Ph.D. in math.	18 The word "mathematics" only appears in one Shakespearean play, *The Taming of the Shrew*.
21 "You don't have to be a mathematician to have a feel for numbers." – John Forbes Nash, Jr.	22 Eggs are $0.12 a dozen. How many eggs can you get for a dollar?	23 Perimeter- The sum of all lengths of a polygon	24 In 2012, a mathematician named Vi Hart sent an open letter to Nickelodeon proving Spongebob's Pineapple was geometrically impossible. Pineapple designer Kenny Pittenger responded on his blog (in video description) by posting a new "mathematically correct" design. This new design is now used on the show.	25 In France, a pie chart is sometimes referred to as a "camembert" (a round cheese wheel).
28 "Math is a subject of beautiful connections; it is not a long list of disconnected topics." – Jo Boaler	29 If you multiply this number by any other number, the answer will always be the same. What number is this?	30 Parallelogram- A quadrilateral in which both pairs of opposite sides are parallel	31 Over 2000 years ago, Eratosthenes estimated the Earth's circumference using math, without ever leaving Egypt, and he was accurate to within 2%.	

BPS MATH MINUTES

April 2022

Monday (Motivation)	Tuesday (Trivia)	Wednesday (Word of the Day)	Thursday (Truth Tales)	Friday (Fun Facts)
				1 Among all shapes with the same area, the circle will always have the smallest perimeter. And among all shapes with the same perimeter, the circle will have the largest area.
4 "Math teaches us that there is every reason to believe that every problem has a solution." – Anonymous	5 When Lisa was 6, her sister Lucy was 3. If Lisa is now 40, how old is Lucy?	6 Prime number- A number that has exactly two different factors, one and itself	7 In 2014, Iranian mathematician Maryam Mirzakhani was the first woman to win the Fields Medal in mathematics.	8 If you shuffle a deck of cards properly, it's more than likely that the exact order of the cards you get has never been seen before in the whole history of the universe
11	12	13	14	15
18 "It is clear that the chief end of mathematical study must be to make the students think." – John Wesley Young	19 What can you put between 7 and 8 so that the result is more than 7 and less than 8?	20 Probability- The measure of the likelihood of the occurrence of an event	21 Nicolaus Copernicus, Polish mathematician and astronomer, theorized that planets revolve around the sun (Heliocentric theory).	22 The Millennium Prize is a $1 million award given to the person who can solve any 1 of the 7 unsolved mathematical problems, but to date only 1 problem has been solved.
25 "Children are not limited in what they can do when they have mathematical skills because to a mathematician "real life" is a special case." – Unknown	26 The total cost of a hoodie and a pair of shoes is $150. The hoodie is $100 more than the shoes. How much does each cost?	27 Quadrants - The four sections of the coordinate plane formed by the intersection of the axes are called quadrants.	28 Benjamin Banneker (1731-1806), an African American man who was mostly self-educated in mathematics and astrology, is best known for building America's first clock—a wooden device that struck hourly.	29 Teenagers texting in Thailand will send the digits "555" to indicate that something is funny. The reason? "5" is pronounced "ha"— so "555" translates to "hahaha."

BPS MATH MINUTES   May 2022

Monday (Motivation)	Tuesday (Trivia)	Wednesday (Word of the Day)	Thursday (Truth Tales)	Friday (Fun Facts)
2 "It does not matter how slowly you go, as long as you do not stop." – Confucius	**3** Use the numbers 2, 3, 4, and 5 and the symbols + and = to make a true equation.	**4** Radius- a line segment that goes from the center to the edge of a circle	**5** Dr. Mark Dean is an African American computer scientist who invented the first gigahertz computer chip and co-invented the Industry Standard Architecture System for computing, which allows for common plug-ins such as personal printers and modems.	**6** There are 293 ways to make change for a $1 using pennies, nickels, dimes quarters and half-dollars.
9 "To not know math is a severe limitation to understanding the world." – Richard P. Feynman	**10** If you toss a coin 10 times and it lands head-up each time, what are the chances it will land heads up if you throw it again?	**11** Remainder - the number left over when one integer is divided by another	**12** In 1925, Dr. Elbert Frank Cox was the first Black man to earn a Ph.D. in mathematics not only in the United States, but in the entire world.	**13** In chess, there are 4,897,256 total possible positions after 5 moves by both players
16 "Math is the only place where truth and beauty mean the same thing." – Danica McKellar	**17** If 3 cats can catch 3 bunnies in three minutes, how long will it take 100 cats to catch 100 bunnies?	**18** Round - to estimate a number to the nearest 10 or 100 using place value	**19** Katherine Johnson is an African American women who contributed to the field of orbital mechanics and helped NASA by putting astronaut John Glenn into orbit in 1962, She is also one of the stars of the movie *Hidden Figures*.	**20** There is a combination of 26,830 possible Tic-tac-toe games, excluding reflections and rotations.
23 "Number rules the universe." – Pythagoras	**24** I add 5 to 9 and get 2. The answer is correct, but how?	**25** Sphere - a three-dimensional figure in which all cross-sections in every direction are circles.	**26** Valerie Thomas is an African American scientist and inventor best known for inventing the Illusion Transmitter in 1980. This technology was the first of its kind in the field of 3D-imagery and is the basis for modern 3D-televisions, video games, and movies.	**27** The Babylonian mile is approximately equal to 11.3 km (about 7 miles).
30	**31** There are several books on a bookshelf. If one book is 4th from the left and 6th from the right, how many books are on the shelf?			

BPS MATH MINUTES   June 2022

Monday (Motivation)	Tuesday (Trivia)	Wednesday (Word of the Day)	Thursday (Truth Tales)	Friday (Fun Facts)
		1 Tape diagram - A group of rectangles put together to represent a relationship between quantities	**2** Lonnie Johnson is a famous African American inventor, mathematician, and NASA engineer who holds over 120 patents. He is famous for inventing the Super Soaker water toy!	**3** The number 8 is such a lucky number in China that the Chinese government scheduled the Beijing Olympics to begin 8 seconds after 8:08 on 8/8/2008
6 "If your attention is divided by added distractions, multiply your mental traction by doing a bit of simple subtraction!" – Kathy Jeffords	**7** Which two whole, positive numbers have a one-digit answer when multiplied and a two-digit answer when added?	**8** Variable- Letters that stand for numbers and can be added, subtracted, multiplied, and divided, as numbers are	**9** Euphemia Lofton Haynes is famous for being the first African American woman to earn a Ph.D. in mathematics, which she earned from the Catholic University of America in 1943.	**10** The line between the 2 numbers in a fraction is called the Vinculum.
13 "We learn more by looking for the answer to a question and not finding it than we do from learning the answer itself." – Lloyd Alexander	**14** How much will a 38 degree angle measure when looked at under a microscope that magnifies 10 times?	**15** Volume- The number of cubic units that fill a three-dimensional region, without any gaps or overlaps	**16** Mae Carol Jemison is a mathematician, engineer, physician, and astronaut. In 1992, she became the first African American woman to visit space when she went into orbit aboard NASA's Space Shuttle Endeavour.	**17** "Eleven plus two" is an anagram* of "twelve plus one" which is pretty fitting as the answer to both equations is 13.

*Same letters in a different order |
| **20** | **21** Here are the dates of three important mathematicians: Sophie Germain   1776-1831 Sonja Kowalevsky   1850-1891 Emmy Noether   1882-1935

Arrange them in order from the shortest- to longest-lived. | **22** Sum - The result of adding a set of numbers or algebraic expressions | **23** Annie Easley is famous NASA computer and rocket scientist and mathematician who contributed to several space programs, inspired others through her participation in numerous outreach programs, and broke down barriers for both women and African Americans in STEM. | **24** |