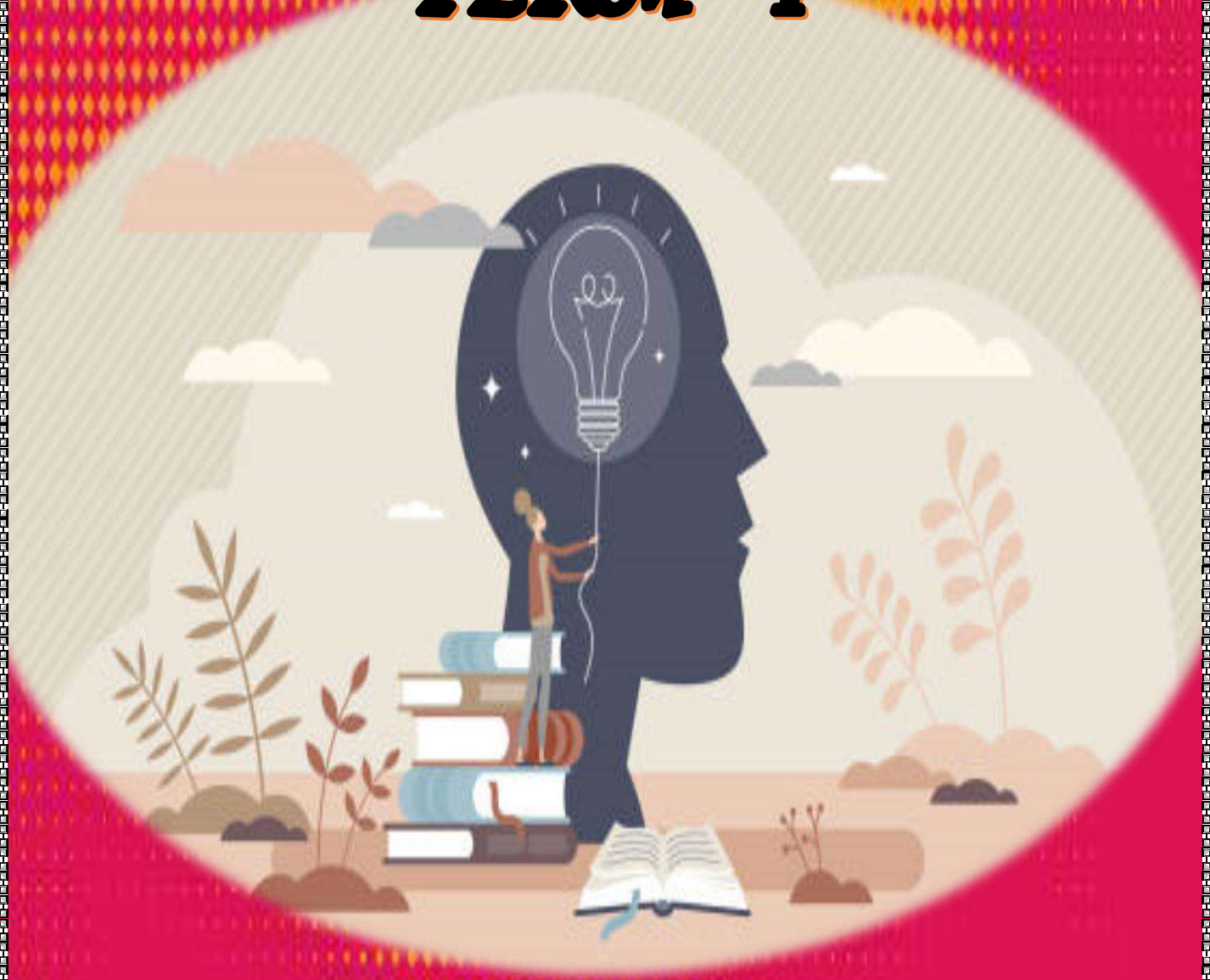
PANCHSHEEL PUBLIC SCHOOL

CURIOUS MINDS – VI

TERM - 1



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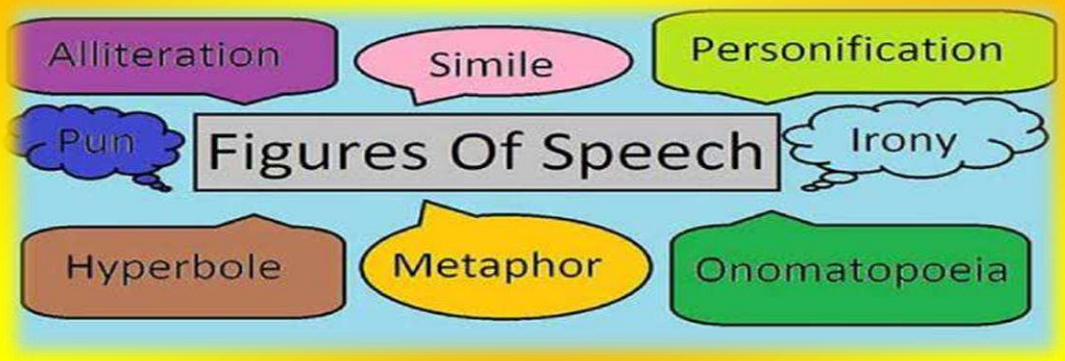


ALLITERATION

Alliteration is the repetition of the initial letter (generally a consonant) or first several words, marking the stressed syllables in a line of poetry.
Example: **H**arry **h**urried **h**ome to watch football on TV.'

IMAGERY

Imagery is a poetic device wherein the poet uses words or phrases that appeal to any of the senses or any combination of senses to create 'mental images' for the reader. Imagery helps the reader to visualise more realistically the author's writings.
Example:
Gold and shiny, vicious, long,
Venom-fanged, hypnotic, strong—
Slid a snake towards the pair.

REPITITION

Repetition is a literary device that repeats the same words or phrases a few times to make an idea clearer.

Example: 1. The old man went **down the street,**
down the street, down the street.

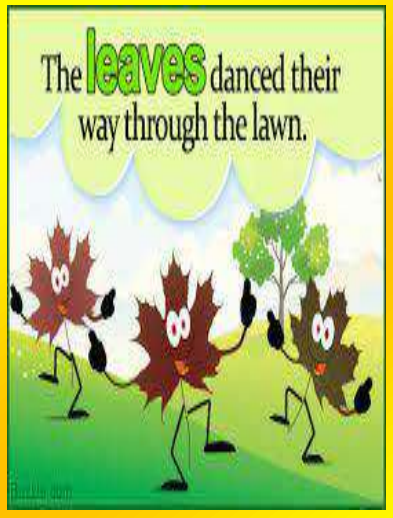
Example 2:

Please, don't cry.
I'm not really gone.
When you look out the window,
I'll be standing on the lawn.
Please, don't cry.
I'll see you again.
Don't be sad;
Keep up your chin.

PERSONIFICATION

Personification is a poetic device which attributes human qualities or personality to inanimate objects odd non-human beings such that they appear to be living human beings.

Example: In the poem ‘Macavity, The Mystery Cat’ the cat has been personified as a criminal.



SIMILE

A simile is a specific comparison by means of the words like or as between 2 different kinds of ideas or objects.
Example: He says his head from side to side with movements like a snake.

LET'S KNOW MORE

FIGURES OF SPEECH

Metaphor

Metaphor is when there is a comparison made between two different things which share something in common.

E.g. The world is your oyster.

Metonymy

Metonymy is when a phrase is replaced with another which has a similar meaning, used to describe something in an indirect manner.

E.g. I remain loyal to the crown.

Onomatopoeia

Onomatopoeia is a word which resembles the sound it is describing.

E.g.My watch ticks loudly.

Oxymoron

Oxymoron is when two words in a phrase contradict one another.

E.g.The girl next door is pretty ugly.

Paradox

Paradox is a statement which contradicts itself.

E.g. Deep down Anna is really shallow.

Personification

Personification is when an object which is not alive is given human qualities.

E.g. My car is a real beauty.

Pun

A pun is a play on words, it uses a word to give a different sense to the sentence and add a double meaning.

E.g. An egg for breakfast is not easy to beat.

Simile

Simile is a phrase which compares something to something else using the words like or as.

E.g. Her hair was as golden as the sun.

Synecdoche

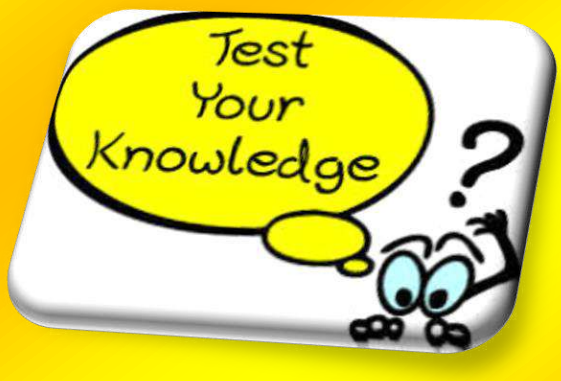
Synecdoche is a statement in which only part of something is expressed to relate to the whole.

E.g. He has just got some new wheel.

Understatement

Understatement is a statement which is made to be less important than what is actually being conveyed.

E.g. I only have two million dollars.



Q- Choose the correct figure of speech used in the following sentences:

1. **Jim jumped from the jeep in the jungle.**
   a. **Alliteration**
   b. **Simile**
   c. **Metaphor**
   d. **Pun**
2. **The opportunity knocked at his door.**
   a. **Pun**
   b. **Personification**
   c. **Alliteration**
   d. **Simile**
3. **He is as brave as a lion.**
   a. **Paradox**
   b. **Understatement**
   c. **Simile**
   d. **Metaphor**
4. **The buzzing bee flew over my head.**
   a. **Alliteration**
   b. **Onomatopoeia**
   c. **Pun**
   d. **Metaphor**
5. **John is a goat.**
   a. **Synecdoche**
   b. **Alliteration**
   c. **Pun**
   d. **Metaphor**

RIDDLE TIME

1.NAME THE WORD WHICH IS BOTH A GAME AND AN INSECT.

2. FIND A WORD THAT BEGINS AND ENDS WITH ‘Y’.

STRIDES WITH SCIENCE

SPACE

What is Space?

Space begins where Earth's atmosphere ends. There was a time when space was believed to be completely empty. However, this is not true. The vast gap between the stars and the planets are filled with huge amounts of gases and dust. Even the emptiest parts of space contain at least a few hundred atoms or molecules per cubic metre.

*Space is black

There is neither air to breathe nor light to scatter in space, making it difficult for humans to survive. Space is black and not blue like our sky. This is because the amount of oxygen molecules is comparatively less in space. It mainly consists of vacuum and the molecules present are not sufficiently close because of which sound does not get transmitted.

How big is it?

No one really knows how big space is. Long distances in space are measured in "light year", which represents the distance that light takes to travel in a year. This is roughly about 9.3 trillion

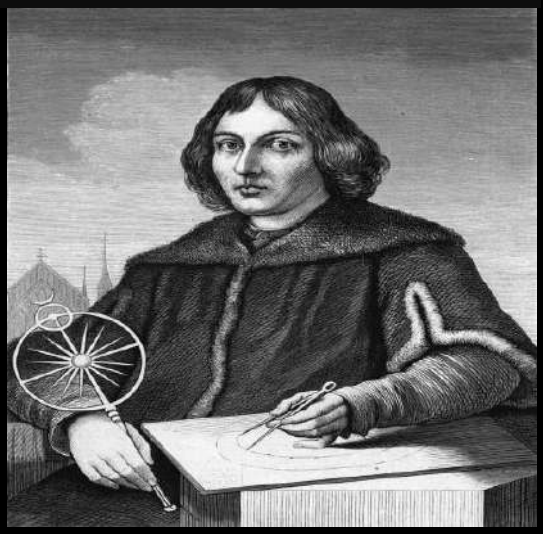
FAMOUS COSMOLOGISTS AND ASTRONOMERS

1.Galileo Galilei

Galileo was a natural Philosopher, Astronomer & mathematician who contributed significantly to the sciences, astronomy, material strength & made ground-breaking telescopic discoveries which make him the "Father of modern science".

2.Nicolaus Copernicus

Nicolaus Copernicus was a Renaissance mathematician & astronomer. He is famous for a model of the universe that placed the sun rather than earth at its centre. This is called "heliocentricity" and is the currently accepted model of the solar system.



3.Albert Einstein

Albert Einstein was a German born theoretical physicist and philosopher of science. He is best known in popular culture for his mass-energy equivalence formula $E=mc^2$, which is thought to be the most famous equation in history. He also developed the general theory of relativity. In 1921, he received the Nobel prize in Physics for his discovery of the law of the photoelectric effect.

AMAZING FACTS ABOUT SPACE

1] One million Earths could fit inside the sun & the sun is considered an average sized star.

2] For years it was believed that Earth was the only planet in our solar system with liquid water. More recently NASA revealed its stronger evidence yet that there is intermittent running water on Mars too.

3] Comets are left over from the creation of our solar system about 4.5billions years ago. They consist of sand, ice and carbon dioxide.

4] You wouldn't be able to walk on Jupiter, Saturn, Uranus or Neptune because they have no solid surface!

5] If you could fly a plane to Pluto, the trip would take more than 800 years.

6] The sunset on Mars appears blue.

7] A full NASA space suit costs $12,000,000.

8] There is a planet 'Super Earth' or 55 Cancri e made of diamonds twice the size of the Earth.

9] Nebulas are the clouds of gases which exist between stars and glow due to the radiation of the light of the stars.

10] Milky Way galaxy is a group of billions of stars of which our own sun is a member.

SPACE ODYSSEY

Space is infinite. We do not know where it begins and where it ends. Read the clues and fill in the blanks.

1] Clouds of rarified gas that exists between stars and glow due to the radiation of light of stars. Name the planet.

Ans. Venus

2] Large meteors that reach the Earth. Useful for scientific research.

Ans. Meteorites

3] Planet Venus is surrounded by clouds made up of:

Ans. Carbon Dioxide

4] Which 2 planets in solar system show Lunar type phases as seen from the Earth.

Ans. Venus and Mercury

5] The Great Red spot is located in which planet?

Ans. Jupiter

6] UrsaMajor, Cygnus, Taurus, Canis, what are these?

Ans. Constellations

7] Which nation first sent chimpanzee into orbit around the Earth?

Ans. USA

8] Who was the first man to walk in space?

Ans. Alexei Leonov

9] In how many days does the planet Neptune take to complete one revolution around the Earth?

Ans. 60,190 days

10] What was the name of special space station launched by the Americans?

Ans. Skylab

TEST YOUE KNOWLEDGE

A] See the pictures and identify the members of universe.

1. 

A group of billions of stars of which Our own sun is a member.

Ans. …….

2. 

Clouds of gas which exist between stars and Glow due to the radiation of light of the stars.

Ans. …….

3. 

One of the many rocky planetoids that move in Elliptical orbits primarily between the orbits of Mars & Jupiter.

Ans. …….

4. 

It is formed when a large star uses up its supply of fuel collapses under their own weights and explodes.

Ans. …….

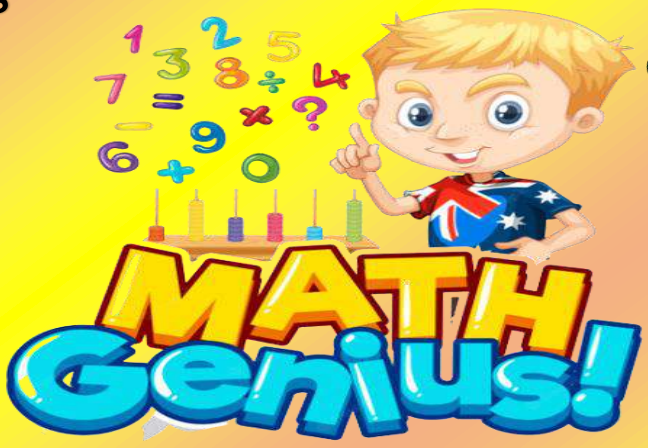
B] Fill in the blanks:

1. Cygnus is an example of ……..
2. First nation to sent a chimpanzee into orbit around the earth is ……
3. The largest volcano on the Mars is ……
4. Comets consist of ……& ……..
5. The sunset on Mars appears ……

C] Answer the following:

1. Who is known as father of modern science?
2. Who got Nobel prize in physics for the law of photoelectric effect?
3. Why wouldn't we able to walk on Jupiter?
4. What would you find if you travelled to the centre of the solar system?
5. Which is the brightest planet in the solar system?

NUMERICAL NOTATIONS



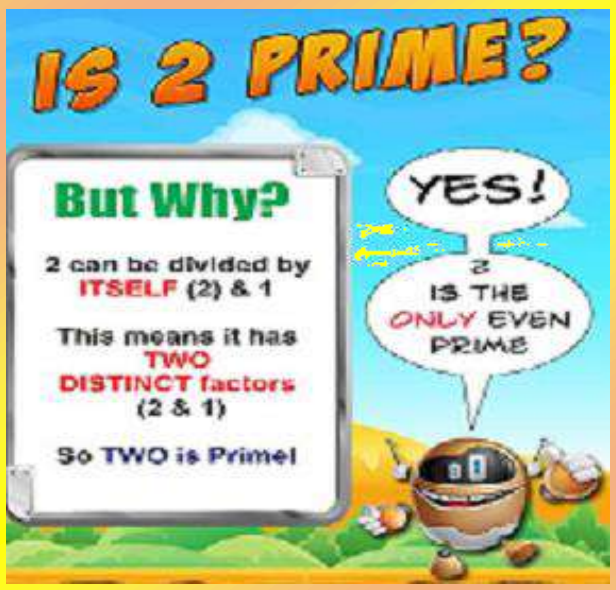
Time, date, phone numbers, street address etc. depends on numbers. The whole world is numbers. But how much do you really know about them? As it turns out, numbers are a million times more fascinating than the most complex equations Pythagoras could think of. Here is a proof.

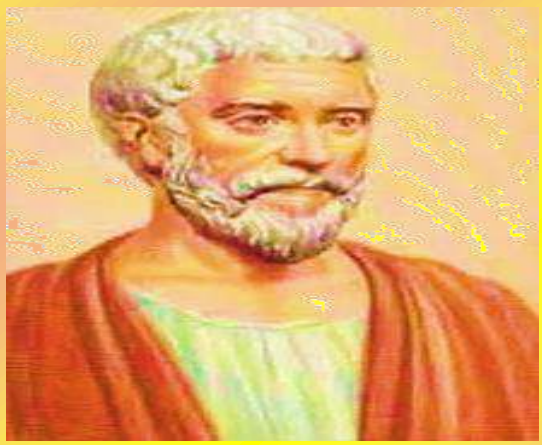
"100" doesn't mean 100"

The word "100" is actually derived from the Old Norse Word "hundrath", which actually means 120, not 100 due to the duodecimal system.

2 is only one even prime number

The number 2 is also the smallest and first prime number (since every other even number is divisible by 2).





The Square Root of two is called "Pythagorus Constant".

The square root of 2 (1.41) is known as Pythagorus Constant. It is also the first irrational number ever to be discovered.

Zero is the only number that can't be represented in Roman numerals

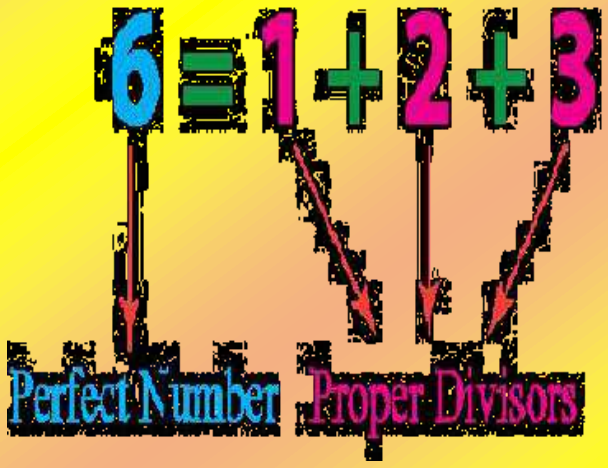
Romans didn't consider zero to be a number at all because you couldn't divide by zero.

There is only one number spelled with the same number of letters as itself

The number 4, is the only number which has 4 alphabets in its spelling.

Roman Numerals were invented as a means of trading

The form of record keeping was used as a means for Romans to easily price different goods and services. Roman numerals are represented by 7 different letters: I, V, X, L, C, D and M.



Six is the smallest perfect number

In number theory, a perfect number is a positive integer that is equal to the sum of its positive divisors.

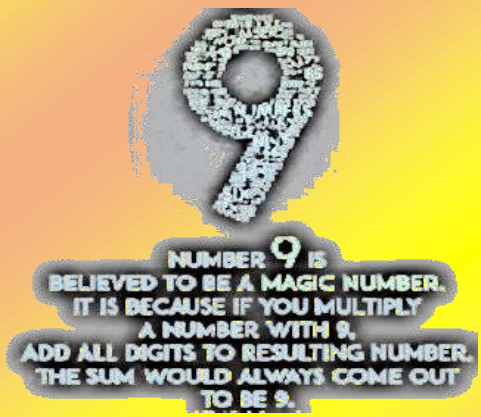
For example: **1 + 2 + 3 = 6**

9 is considered a "Magic" number

If you multiply a number by 9 and add all the digits of the new number together, the sum will always add up to 9.

Example: 8 X 9 = 72 and 7 + 2 = 9

Or 4 X 9 = 36 and 3 + 6 = 9



7 is considered to be a lucky number

7 is the most significant number across religions and cultures. For example: There are 7 colours in the rainbow, 7 days in a week, 7 notes on a musical scale, 7 seas and 7 continents.

Zero is an even number

Mathematically, an even number is one that can be divided by 2 and still remain a whole number. Zero meets the criteria for this because if you halve zero, you get zero.

TEST YOUR KNOWLEDGE

Fill in the blanks

a) Smallest perfect number is _____.
b) Smallest prime number _____.
c) Even prime number _____.
d) _____ is considered as a lucky number.
e) _____ is considered as magic number.
f) The only number that can't be represented by Romans _____

2) How will you prove that 6 is smallest perfect number?

3)Search some other magical numbers and write few lines on them.

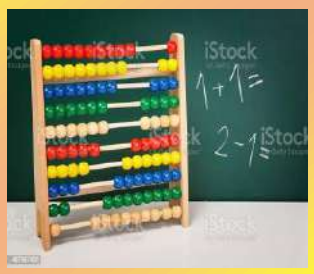
Evolution Of Computers

Nowadays, computers are used for various personal and professional tasks. They Versatile and can perform various functions at the same time.
The word computer is derived from the word '**compute',** which means **'to calculate'.** Although the function of the present-day computer is not limited to do Just calculations, earlier computers were used for this sole task.

History Of Computers

One of the earliest and most well-known devices was an abacus. Then in 1822, the father of computers, Charles Babbage began developing what would be the first mechanical computer. And then in 1833 he actually designed an Analytical Engine which was a general-purpose computer.

1. Abacus



The abacus (plural abaci or abacuses), also called a counting frame, is a calculating tool which has been used since ancient times. It was used in the ancient Near East, Europe, China, and Russia, millennia before the adoption of the Hindu-Arabic numeral system. The exact origin of the abacus has not yet emerged. It was the first mechanical device used for calculation.

2. Napier's Bones

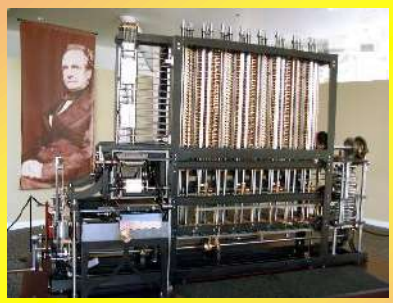
Napier's bones is a manually-operated calculating device created by John Napier of Merchiston, Scotland for the calculation of products and quotients of numbers. The method was based on lattice multiplication, and also called rabdology, a word invented by Napier. Napier published his version in 1617

In 1614, Edinburgh-born Renaissance scholar John Napier invented logarithms. A means of simplifying complex calculations, they remain one of the most important advances in the study and practical application of mathematics.

3. The Pascaline

Pascaline, also called Arithmetic Machine, the first calculator or adding machine to be produced in any quantity and actually used. The Pascaline was designed and built by the French mathematician-philosopher Blaise Pascal between 1642 and 1644.

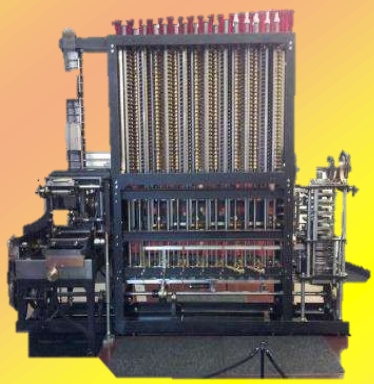
4. Difference Engine



The **Difference Engine** was an early calculating machine designed by the English mathematician and inventor, Charles Babbage, during the 1820s and 30s.

Though and actual machine was never assembled, The Difference Engine represented the first complete design of an automatic calculating machine, created to Compute mathematical tables.

5. Analytical Engine



The Analytical Engine was to be a general-purpose, fully program-controlled, automatic mechanical digital computer. It would be able to perform any calculation set before it. There is no evidence that anyone before Babbage had ever conceived of such a device, let alone attempted to build one.

The Babbage Analytical Engine, 1833, is considered the first steam-powered computer. Charles Babbage is considered by many to be the 'Father of the Computer' and his assistant, Lady Ada Lovelace, the 'First Computer Programmer' because she wrote mathematics problems for Babbage's machines.

Generation of Computers

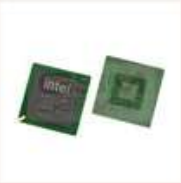
This long period is often conveniently divided into the subsequent phases called computer generations: First Generation Computers (1940-1956) Second Generation Computers (1956-1963) Third Generation Computers.

long period is often conveniently divided into the subsequent phases called This computer generations:

First Generation Computers (1940-1956)
Second Generation Computers (1956-1963)
Third Generation Computers (1964-1971)
Fourth Generation Computers (1971-Present)
Fifth Generation Computers (Present and Beyond)

Amazing Facts

Computer Generations

Generation	Device	Hardware feature	Characteristics	System names
First (1942-1959)		▶ Vacuum Tubes ▶ Punch Cards	▶ Support machine laguage only ▶ Very costly ▶ Generate lot of heat ▶ Hhuge size ▶ Consumed lot of electricity	▶ ENIAC ▶ EDVAC ▶ TBM 701
Second (1959-1965)		▶ Transistors ▶ Magnetic Tapes	▶ Batch operating system ▶ Faster, smaller and reliabe than previous generation ▶ Costly	▶ Honeywell 400 ▶ CDC 1604 ▶ IBM 7030
Third (1965-1975)		▶ ICs ▶ Large capacity disk and Magnetic Tapes	▶ Time Sharing OS ▶ Faster, smaller and reliabe cheaper ▶ Easier to update	▶ IBM 360/370 ▶ CDC 6600 ▶ PDP 8/11
Fourth (1975-1988)		▶ ICs with VLSI Technology ▶ Semiconductor Memory ▶ Magnetic tapes and floppy as portable	▶ Multiprocessing & GUI OS ▶ Object oriented programs ▶ Small, affordable, easy to Use ▶ Easier to update	▶ Apple II ▶ VAX 9000 ▶ CRAY 1/2
Fifth (1988-Present)		▶ ICs with ULSI Technology ▶ Large capacity hard disk with RAID Support ▶ Optical disks as portable read-only storage media ▶ powerful servers, internet, Cluster computing	▶ Powerful, cheaper, reliable, easy to use, portable ▶ Rapid software development possible	▶ IBM ▶ Pentium ▶ PARAM

Test your knowledge

Q1. Who is father of the computer?

Ans._____

_____.

Q2. What is the meaning of word **'Compute'?**

Ans._____.

Q3. Name the first mechanical device used for calculation.

Ans._____.

Q4. Who is invented Napier's bones?

Ans._____

Q5. Who is designed Difference Engine and when?

Ans._____

Q6. Who developed Pascaline and when?

Ans._____

Q7. Which hardware features used in first generation computer?

Ans._____

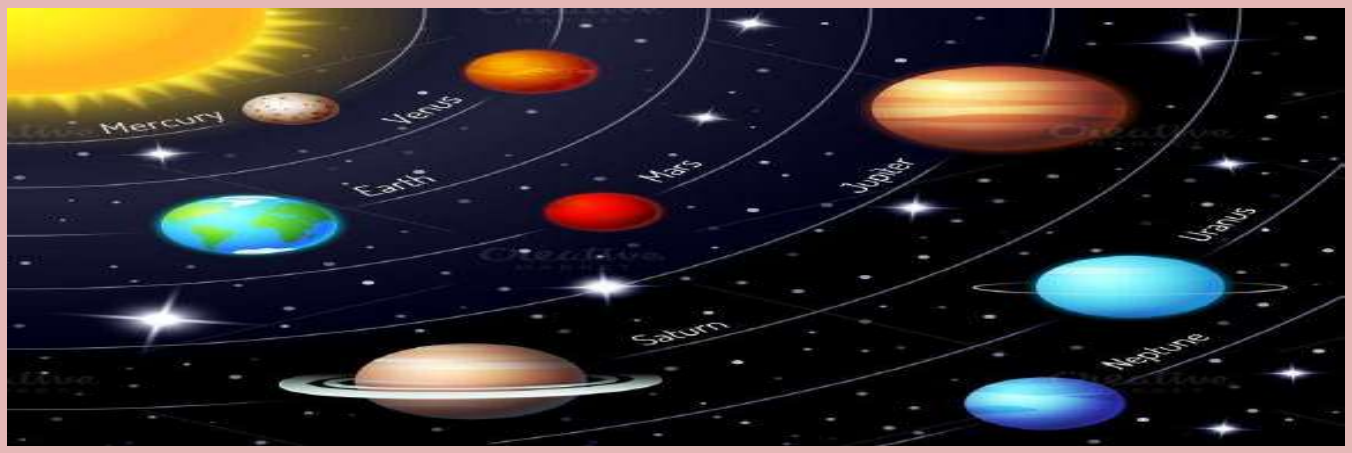
Q8. When was developed Fifth generation of computer?

_____

ARCHIVAL EXPLORATION

The Earth in the Solar System

The Earth is the third planet from the Sun and the only place that's inhabited by living things. It is the fifth-largest planet in the solar system, and it is the only world with liquid water on the surface. Among all the four planets closest to the Sun, the Earth is the biggest planet. The solar system consists of our star, the Sun, and everything bound to it by gravity – the planets Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune, dwarf planets such as Pluto, dozens of moons and millions of asteroids, comets and meteoroids.



Amazing facts

- Venus is the hottest planet in the solar system and has an average surface temperature of around 450° C.
- The Sun is large enough that approximately 1.3 million Earths could fit inside
- There are about three trillion trees on Planet Earth, and between 100-400 billion stars, approximately, in the galaxy.
- There's a planet made of diamonds twice the size of earth The "super earth," aka 55 Cancri e, is most likely covered in graphite and diamond.

TEST YOUR KNOWLEDGE

Answer the following questions.

1. Does the solar system only consists of planets?

2. What is a ‘Meteoroid’?

3. What is an ' Asteroids'?

4. What is ' Galaxy' ?

Question 1. How does the moon shine?

(a) Have their own natural light (b) Reflects the Venus light

(c) Reflects the earth light (d) Reflects the sunlight

Question 2. What is the orbital period of the Moon?

(a) 25 days (b) 27.32 days

(c) 28 days (d) 29 days

Question 3. The Stars are not visible during the day because

(a) Of their self illumination (b) Stars are far away from the earth

(c) Sun light is very bright (d) Their size is large

Question 4. Moon appears big because

(a) It is very big than the earth (b) It is bigger than the sun

(c) It is near to the earth (d) It is far away from the earth

Question 5. Which star is the head of the solar system

(a) Earth (b) Moon

(c) Sun (d) Big bear

Question 6. Which is the closest planet to the Sun

(a) Earth (b) Venus

(c) Mars (d) Mercury

Question 7. Which is the brightest planet in the universe?

(a) Mercury (b) Venus

(c) Earth (d) Saturn

Question 8. Which is the nearest star to the earth

(a) Mercury (b) Moon

(c) Venus (d) Sun

Question 9. All the planets move around the sun in an _____.

(a) Rectangular path (b) Straight path

(c) Elliptical path (d) Circular path

Question 10. Why is the earth called as Blue Planet?

(a) Air colour is blue (b) Land colour is blue

(c) Building having blue colour (d) Two-third surface is covered by water

Question 11. _____ is the closest celestial body to the earth.

(a) Earth (b) Galaxy

(c) Moon (d) Planet

Question 12.Which of the following is a natural satellite?

(a) IRSA (b) EDUSAT

(c) Moon (d) INSAT-I

Fill in the blanks.

(a) The planet which is farthest from the Sun is _____ .

(b) The planet which appears reddish in colour is _____.

(c) A group of stars that appear to form a pattern in the sky is known as a _____ .

(d) A celestial body that revolves around a planet is known as _____.

(e) Shooting stars are actually not _____.

(f) Asteroids are found between the orbits of _____ and _____ .

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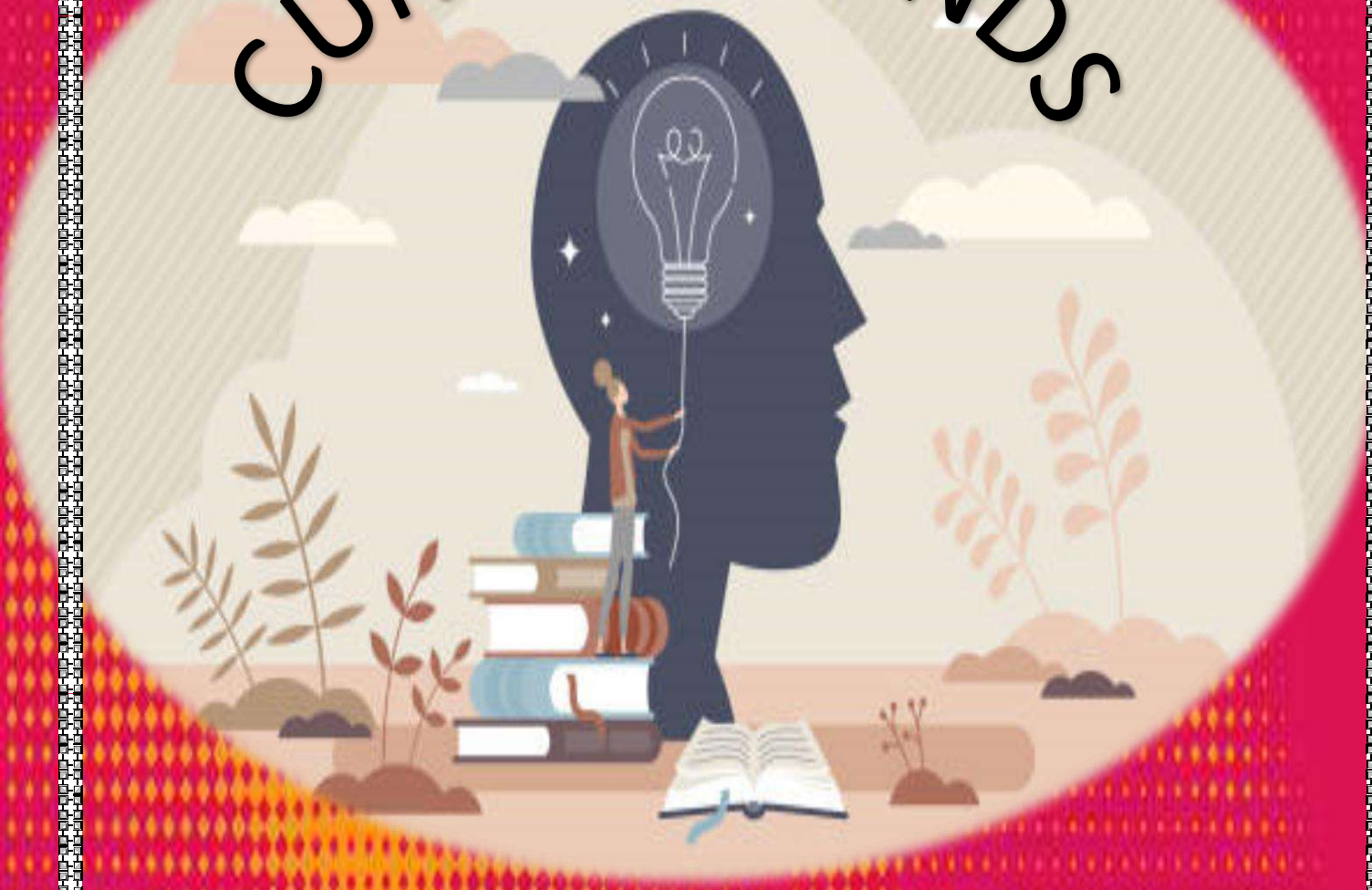
CURIOUS MINDS



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CURIOUS MINDS