Quest

Monthly Science and Mathematics magazine

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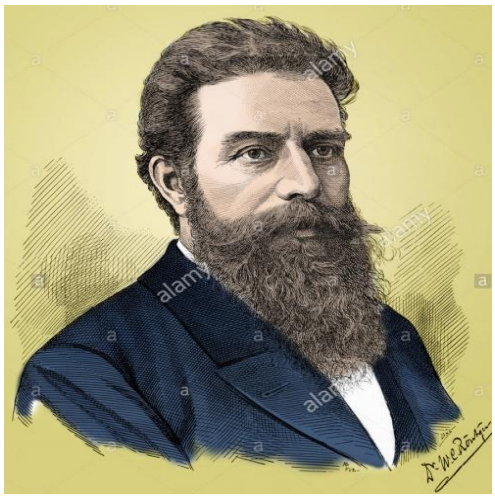
IDENTIFY ME???



- **I was born on 27th March 1845, and died on 10th February 1923.**
- **I am a German Physicist and played a key role in the discovery of X-Rays.**
- **I was the first person to systematically produce and detect electromagnetic radiation in a wavelength range today known as x-rays or Röntgen rays.**
- **I was professor of physics at the universities of Strasbourg (1876–79), Giessen (1879–88), Würzburg (1888–1900), and Munich (1900–20).**
- **My research also included work on elasticity, capillary action of fluids, specific heats of gases, conduction of heat in crystals, absorption of heat by gases, and piezoelectricity.**
- **I earned the first Nobel Prize in Physics in 1901.**

Why are bananas curved?

Learn how the force of gravity affects even how fruits grow

There is a tendency in fruits and plants to grow in a particular direction towards the force of gravity. The growth towards the direction of gravity is called 'positive geotropism',
While developing on the plant, bananas initially grow downward, but slowly change direction to curve upward. Opposite to the direction of gravity, in a process called 'negative geotropism'.
Why does this happen??? It's genetics. The very first banana plant grew in rainforests where the canopies of the taller trees allow very little sunlight to penetrate to the lower levels. The fruit had to strain upwards to catch the scanty rays of sun and developed a curved shape in the process.

Measure your Astronomical Quotient

1. The axis of rotation of the earth is inclined to its orbital plane at an angle of _____

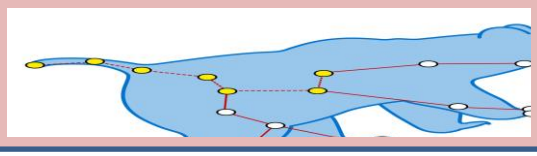
a. 23.5^0 b. 66.5^0 c. 25.3^0 d. 65.5^0

2. Name the least dense planet in our solar system

a. Mercury b. Mars c. Saturn d. Jupiter

3. The stars of Ursa Major appear to revolve around_____

a. The sun **b. The earth**
c. The moon **d. The polestar**



4. The motion of earth around the sun is called_____

a. Change of season **b. Revolution**
c. Rotation **d. Orbits**

5. In Indian astronomy, planet is called_____

a. Objects b. Graha c. Budha d. Bodi

6. Name the comet which appears every 76 years.

a. Hallet's **b. Meteor**
c. Halley's **d. Polestar**

Answers:

- To Astronomical Quotient:
  1. b 2. c 3. d 4. b 5. b 6. c
- Name of the Scientist: Wilhelm Conrad Rontgen

FIND OUT??

The Man Who Knew Infinity

- **By the age of 13, he had completed advanced trigonometry and discovered complex theorems on his own.**
- **December 22nd is celebrated as National Mathematics Day as he was born on that day in 1887.**
- **It is said that the numbers 1-10,000 were his best "personal friends". He could effortlessly tell their factors, divisors, how the number can be split & each part of number can be squared /cubed etc. to produce interesting numbers, and much more.**
- **1729 no. gave him fame and name. The most excited work done by him is 'The Partition formulae'.**
- **He used to say- "An equation for me has no meaning unless it represents a thought of GOD".**

PUZZELS

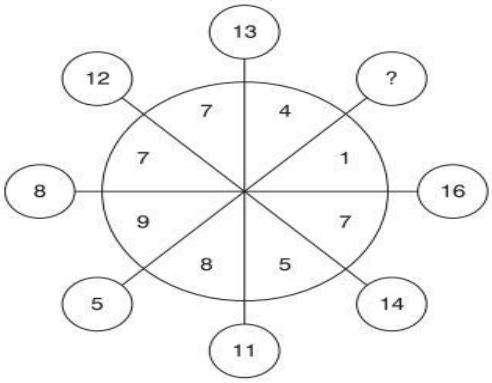
1. What is the smallest number that, when divided successively by 45, 454, 4545 and 45454, leaves the remainders 4, 45, 454, and 4,545 respectively?

2. Buns were being sold at three prices: one for a penny, two for a penny, and three for a penny. Some children (there were as many boys as girls) were given seven pennies to spend on these

buns, each child to receive exactly the same value in buns. Assuming that all buns remained whole, how many buns, and of what types, did each child received?

3. On a clock, how many times a day do the minute and hour hand overlap?

4. Find the missing number?



The White Trail

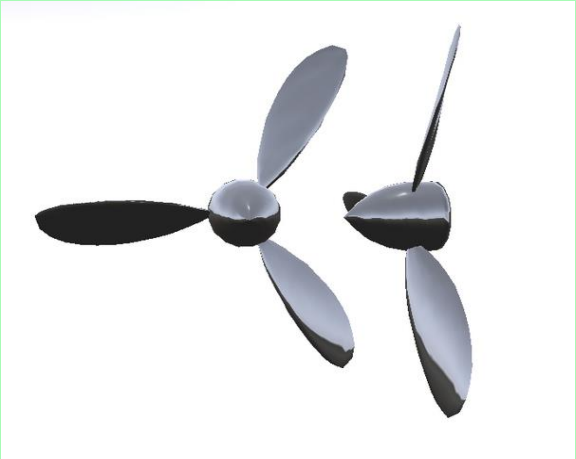
What is the white trail left behind in the sky by jets called? How is it formed?

TWISTED BLADES

What is the function of an aeroplane's propeller and why are its blades twisted?

The blades of the propeller cut through the air and draw the air back in a powerful stream. This air pushes the propeller and therefore the aeroplane forward in conformity with Newton's Law that action and reaction are equal and opposite.

The blades of the propeller go round faster at the tips than they do near the centre. If the blade was at the same angle at the tip as it is at the centre, the air resistance on the tip would be too much. This would slow the propeller down or bend the blade. A twisted blade ensures that the air resistance is the same on the entire surface and that air gets drawn back so that the plane gets a forward thrust.



Ans1- 3

Ans2- There must have been three boys and three girls, each of whom received two buns at three for a penny and one bun at two for a penny, the cost of which would be exactly be 7.

Ans 3- 22 times a day

Ans 4- 17