

Gyan Bharati School

Quest....

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identify!!!

I am a 'Father of Geometry'. You all must have studied about my theories in school maths textbook.

I also published a famous textbook named as 'Elements' .



- I was born on 11th May 1918, and died on 15th February 1988.
- I played a key role in the development of quantum Electrodynamics (the theory that describes how light and matter interact) earning a Nobel Prize in 1965.
- I also contributed to the fields of Quantum computing and Nanotechnology.
- I was a member of the Rogers commission that lambasted NASA over the destruction of space shuttle Challenger in 1986.



I gained a reputation for being able to explain complex elements of theoretical physics in an easily understandable ways, and was sometimes referred to as "The Great Explainer"

What Skills Do I Need to Study Physics?

- **MATHEMATICS:** You don't have to know everything-that's impossible-but you do have to be comfortable with mathematical concepts and how to apply them.
- **PROBLEM SOLVING AND SCIENTIFIC REASONING:** It is helpful for a physics student to have a more general knowledge of how to tackle a problem and apply logical reasoning to arrive at a solution.
- **TECHNICAL KNOWLEDGE:** Technical tools, especially computers are used in the analysis of scientific data. As such, you need to be comfortable with computers and different forms of technology too.
- **GOOD STUDY HABITS:**
 - a) Pay attention in the class and take notes.
 - b) Review the notes while reading the book, and add more notes if the book explains something better or different.
 - c) Look at the examples.
 - d) Do your homework, even if it's not being graded.
- **REALITY CHECK:** At some point in studying physics, you will need to take a serious reality check.

" You are probably not going to get a Nobel Prize and even if you write a physics book, it may just be a published thesis that about 10 people in the world buy.

Accept all of these things. If you still want to be a physicist, then it's in your blood. Go for it. Who knows...May be you will get that Nobel prize after all."

BRAIN TEASERS....

1. What is black when you buy it,
red when you use it,
and grey when you throw it away..??

2. Can you guess the scientist name from the pictures rebus
below?



3. It is the son of the water but when the son returns to parent, it
dies.

What is it?



Is there life in clouds???

Yes. Up to two million tons of bacteria are lofted by air currents into the atmosphere each year, along with 55 million tons of fungal spores and an unknown quantity of algae. These microscopic life forms are thought to play an important part in the weather by causing the water vapour in clouds to precipitate into rain more often than it would in a lifeless atmosphere.

ANSWERS: NAME OF THE SCIENTIST : RICHARD FEYNMAN

ANSWERS OF BRAIN TEASERS:

1. CHARCOAL

2. ISAAC NEWTON.

EXPLANATION: I + SACK (SAAC) + KNEE (NEW) + TON

3. ICE

The Game of Nim

Write three numbers in three lines.

The two players take turns reducing one of the numbers.

The player who makes the last move loses.

Start	Player 1	Player 2	Player 1	Player 2	Player 1	Player 2
5	→ 2	2	2	2	0	0
3	3 → 2	2 → 1	1 → 0			
1	1	1 → 0	0	0	0	0

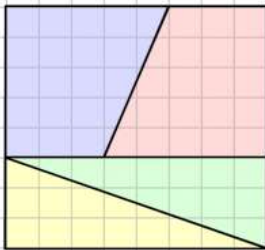
Loses!

Challenge :

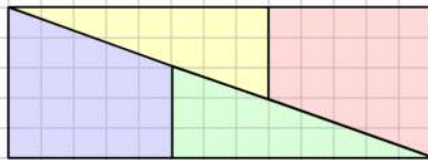
1. Discover a winning strategy with (5, 3,1), if you are the first player
2. Play the game with other numbers such as (7,4,2), (6,5,3),.....



Does 64 equals to 65 ?



$$8 \times 8 = 64$$



$$5 \times 13 = 65$$

Cut out an $8'' \times 8''$ square as shown and rearrange the pieces to form a $5'' \times 13''$ rectangle, thus proving $64 = 65$. What is wrong with this?

The four 4s puzzle

Use four 4s and any number of math symbols (such as +, -, ×, /, √,) to form as many different numbers as possible.

Examples

$$0 = 4 - 4 + 4 - 4$$

$$1 = 4 - 4 + 4 / 4$$

$$2 = 4 / 4 + 4 / 4 \quad \text{or} \quad 4 - (4 + 4) / 4$$

$$3 = (4 + 4 + 4) / 4$$

$$4 = (4 + 4) / 4 + \sqrt{4}$$

$$5 = (4 \times 4 + 4) / 4$$

$$6 = (4 + 4 + 4) / \sqrt{4}$$

$$7 = 4 + 4 - 4 / 4 \quad \text{or} \quad 44 / 4 - 4$$

$$8 = 4 \times (4 / 4) + 4$$

$$9 = 44 / 4 - \sqrt{4} \quad \text{or} \quad 4 / 4 + 4 \times \sqrt{4}$$

$$10 = (4 + 4 / 4) \times \sqrt{4}$$

$$11 = 44 / (\sqrt{4} + \sqrt{4})$$

$$12 = 4 \times (4 - 4 / 4)$$

$$13 = 44 / 4 + \sqrt{4}$$

$$14 = 4 \times (\sqrt{4} + \sqrt{4}) - \sqrt{4}$$

$$15 = 44 / 4 + 4$$

$$16 = 4 \times 4 + 4 - 4 \quad \text{or} \quad 4 \times 4 \times 4 / 4$$

$$17 = 4 \times 4 + 4 / 4$$

$$18 = 4 \times (\sqrt{4} + \sqrt{4}) + \sqrt{4}$$

$$19 = \lfloor 4.4 \times 4.4 \rfloor$$

$$20 = 4 \times (4 + 4 / 4)$$

$$21 = \lfloor 4.4 \times 4 + 4 \rfloor$$

$$22 = 4 \times 4 + 4 + \sqrt{4}$$

$$24 = 4 \times (\sqrt{4} + \sqrt{4} + \sqrt{4})$$

$$25 = (4 + 4 / 4)^{\sqrt{4}}$$

HOME TASK :Use five 5s and any number of math symbols (such as +, -, ×, /, √, . . .) to form as many different numbers as possible.



ALL THE BEST.....