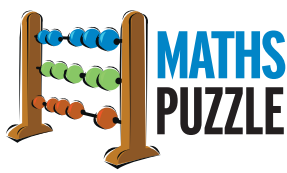




6 MELANGE

R. Keerthana



PUZZLE 743

1. Find the probability of selecting a square number among first 1000 natural numbers?

The largest perfect square below 1000 is 31² and so the required probability = 31/1000 = 0.031

ANSWER: 31/1000



FACE TO FACE



MAGIC SQUARE PUZZLE

122	174		113		
56	17	56	68	69	
24	54		56		
36	68	129	179	63	
743	103		126		
68	89	71	53		5
78		95	37		109
	6				

Fill the empty cells using numbers from 1 to 64 each only once such that

- Each row, column and two main diagonals of each 4x4 sub square gives the magic sum of 130.
- Each 2x2 square marked in the same colour gives the sum of 130.
- The center 2x2 marked in black border in each 4x4 sub square gives a sum of 130.
- Group of cells in boxes within dotted lines is a cage.

Cage sum is mentioned at the top in respective colours.

122	174		113		
9	49	40	32	2	15
64	8	17	41	55	58
24	48	57	1	26	23
36	68	129	179	63	
33	25	16	56	47	34
3	43	62	22	4	13
68	89	71	53	60	12
54	30	11	35	53	60
14	38	51	27	44	37
78		95	37		109
59	19	6	46	29	20

Can you identify the person in the picture?

The Oscar-winning actor rescued a man from a burning vehicle after it crashed near his home in California on Monday. Send in your answers to school@thehindu.co.in with the subject: Person.
Yesterday's answer: **Mohamed Nasheed Vishwa Chalwa**, of Class 8, Karnatak Public School, Bidar, sent the correct answer. Congrats!

QWIKIPEDIA

What is Qwikipedia?

Ever been on Wikipedia to look up an article? More often than not, we start with one topic, click a few links and within no time are reading about something else. Qwikipedia is a game that tries to quench this curiosity in us. The objective is to get to a particular Wiki page, starting from a specific article, using minimal clicks. There is no single correct answer, so we might surprise ourselves by finding new routes each time!

Thursday's Trekker

Zinnia → Lead

Zinnia

U.S. astronaut Scott Kelly tweeted a photo of one of the orange flowers, writing: "First ever flower grown in space makes its debut." Yes, Zinnia, a bright coloured flower species belonging to sunflower tribe, has had the unique honour of becoming the first flower to grow in ISS. Their distinctive features include solitary flowering on long stems in a variety of bright colours. Named after German botanist Johann Gottfried Zinn, they are widely found in Mexico, other South America countries and Southwestern United States.

Southwestern United States

The Southwestern United States constitutes Arizona, California, Colorado, Nevada, New Mexico, Oklahoma, Texas and Utah. The geography of the region is mainly made up by four features: the Mojave, Sonoran, and Chihuahuan Deserts, and the Colorado Plateau. Although not called a desert, the Colorado Plateau is mostly made up of high desert. Within the Southwest U.S. region, the Colorado is bordered to the east by the Rocky Mountains and the Llano Estacado. The Plateau is characterised by a series of plateaus and mesas, interspersed with canyons, including the Grand Canyon.

Rocky Mountains

Commonly known as the Rockies, it marks the major mountain range in Western North America. It stretches from British Columbia to New Mexico. The Rocky Mountains were initially formed from 80 million to 55 million years ago. A number of tectonic activities and erosion by glaciers have sculpted the Rockies into dramatic peaks and valleys. Humans started to inhabit the region after the last ice age. Currently, much of the mountain range is protected by public parks and forest lands, and is a popular tourist destination. The region is rich in minerals including copper, gold and lead to name a few.

Lead

Lead is a chemical element with the symbol Pb. It has the highest atomic number among all stable elements. It is used in construction, lead-acid batteries, bullets and shots. If ingested, lead is poisonous to animals and humans, damaging the nervous system and causing brain disorders. Flint River in a Michigan city has been in news as its water has been contaminated and many suffer lead poisoning there.

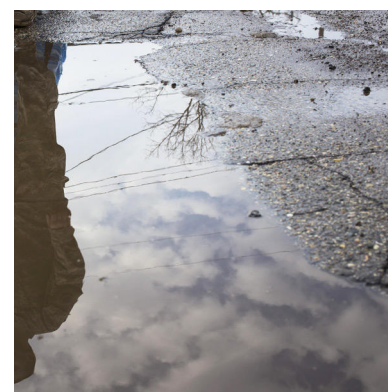
So the path we travelled today is

Zinnia → Southwestern United States → Rocky Mountains → Lead
Three clicks! Hop over. It's time for the next question:

Friday's Freerider

Kabuki → Spider-Man
Send in your paths for the above to school@thehindu.co with the subject: Qwikipedia

PHOTOS: TWITTER/SCOTT KELLY, REUTERS AND AP



Painting maestros in the making

Corner Stone's annual art exhibition is a stunning reminder of how compositions by children are remarkably enduring, writes **Arathi M**



P.D. Paul (fourth from the left, back row) with his students Sneha Krishnan, Nripan Babu, Aradhana, N. Anthara and N. Keerthi Priyanka at the exhibition. PHOTO: SPECIAL ARRANGEMENT

Painting exhibitions are surreal. Most are forgettable, many are good and very few stay with you for a long while. The 'Sprouts 2016' collection at the Vinnyasa Premier Art Gallery by five students is a stunning reminder of how compositions by children are remarkably enduring.

The 8th edition of the annual exhibition organised by Corner Stone, an art school run by P.D. Paul, has Sneha Krishnan, Nripan Babu, Aradhana, N. Anthara and N. Keerthi Priyanka display their creations. The diverse and imaginative topics on which they have based their works range from 'Joy', 'Breathing Landscapes', 'Seasons', 'Colours of a rainbow' to 'Culture of Kerala'.

The exhibition, which was inaugurated on January 12 by Justice T. Raja of the Madras High Court, will run on till January 22. The prepara-

“ Some people lost their paintings during the flood and had to rework them all over again ”

tion for the exhibition was no easy task, says Paul. "Some people lost their paintings during the flood and had to rework them all over again. There was a time when I thought we would have to call off the exhibition. But everything worked out and this year's collection is better than that of the last year," smiles the happy teacher.

It is the first time many of them have displayed their works. An excited Sneha, a class VIII student at Chettinad Vidyasharam, said, "I started working on the paintings by mid-October and finished them by December. My topic 'Joy' portrays the hap-

piness I see around me."

For Anthara, the inspiration was her homeland Kerala. "I was a nervous wreck before the inauguration, but as soon as I got to the part where I had to explain my work to the people, I became more confident and calm," said the class VII student at SBOA School. The youngest among the exhibitors is Aradhana, a class III student at PSBB Millennium School, whose topic is 'Colours of Rainbow'.

The exhibition has provided an opportunity to this talented lot to display their passion and they are thankful for it. "Paul sir, our parents and all the visitors praised our paintings and as artists we are much more convinced of our work now," concludes Sneha.

The exhibition is on till January 22 at Vinnyasa Premier Art Gallery, 21/11, First Main Road, CIT Colony, Mylapore. Timing: 11 a.m. to 7 p.m.

The Hindu In School organises sports event

Schools are invited to register for Muddy Soles 2016 on or before Jan 22

HYDERABAD: The Hindu in School, in association with Open Minds - A Birla School, will conduct Sports Event - Muddy Soles 2016 from February 3 to 5 to encourage sportsmanship and leadership skills among students, through competition.

As many as 40 schools will participate in various sports activities such as track events, football, basketball, tennis, chess and carrom at the Open Minds Campus in Kollur, Hyderabad. Schools are invited to register for team games, and individual indoor/outdoor games. The last date for registration is January 22.

Contact 9247174499 for registration and more details.

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Extinct crustacean was all eyes

PARIS: A tiny but scary-looking marine critter that died out with the dinosaurs, caught prey with the aid of two monstrous eyes -- each a quarter of its body length, scientists said Tuesday.

The giant peepers were composed of 18,000 lenses each -- a record only ever surpassed by modern-day dragonflies, a team wrote in the science journal Nature Communications.

The sophisticated organs belonged to Dollocaris ingens, an extinct arthropod which lived about 160 million years ago, during the Jurassic geological period better known for the rise and fall of the dinosaurs.

An arthropod is an animal with an exoskeleton and segmented body -- including groups like today's insects, spiders and crustaceans.

D. ingens, a swimmer, would have had a crab-like shell, with three pairs of clawed, segmented legs with which to catch tiny shrimps, and eight pairs of stubby swimming appendages.

“ It is clear that its huge, panoramic, multi-faceted acute eyes were crucial to scanning its environment and to detecting potential moving prey ”

and each eye about a quarter of that. For the study, experts used special microscopes and scans to examine fossilised D. ingens eyes dug up in south-east France.

It is extremely rare to find well-preserved samples of internal eye structure.

The first compound eyes, made up of many individual units like those of ants, are thought to have appeared in the Cambrian period some 500 million years ago -- revolutionising animal development, according to study co-author Jean Vannier from France's University of Lyon.

"To see and be seen changed everything -- with eyes you could become a more effective hunter, while prey became more easily detectable," he explained.

"All this led to a new dynamic -- for some to better protect themselves, for others to become better at detection, and new evolutionary pressures."

Their examinations confirmed that C. ingens was a "visual hunter," said Vannier.

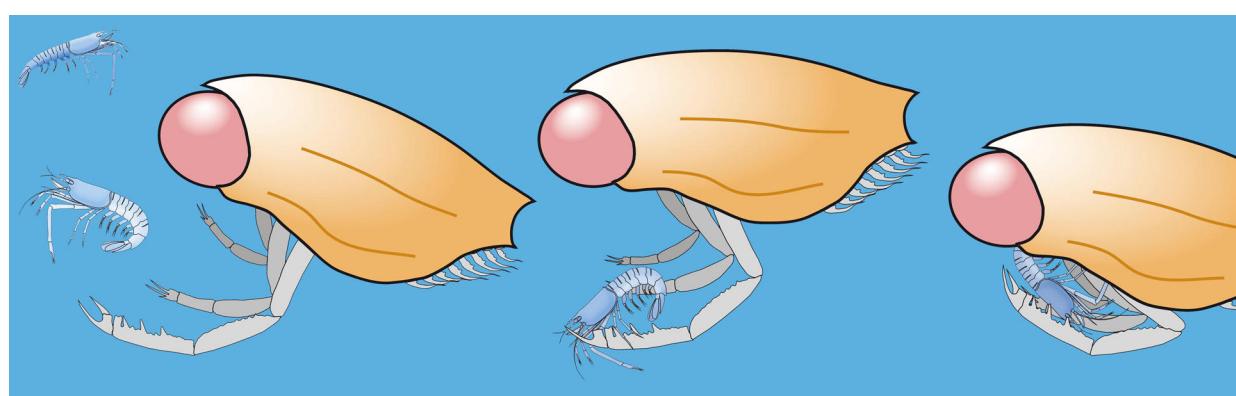
Its eyes shared features with those of modern-day insects and crustaceans.

"It is clear that its huge, panoramic, multi-faceted acute eyes were crucial to scanning its environment and to detecting potential moving prey," the study authors wrote.

It was probably not a very dexterous swimmer, and more likely an "ambush predator" pouncing on prey from a concealed position.

While this line of animals disappeared, its eye type continued independently in other animals. AFP

Dollocaris ingens, an extinct arthropod, had 18,000 lenses in each eye -- a record only ever surpassed by modern-day dragonflies



VISUAL HUNTER An artist's reconstruction of a Dollocaris, of the Jurassic seas. PHOTO: AFP

An arthropod is an animal with an exoskeleton and segmented body -- including groups like today's insects, spiders and crustaceans. D. ingens, a swimmer, would have had a crab-like shell, with three pairs of clawed, segmented legs with which to catch tiny shrimps, and eight pairs of stubby swimming appendages.