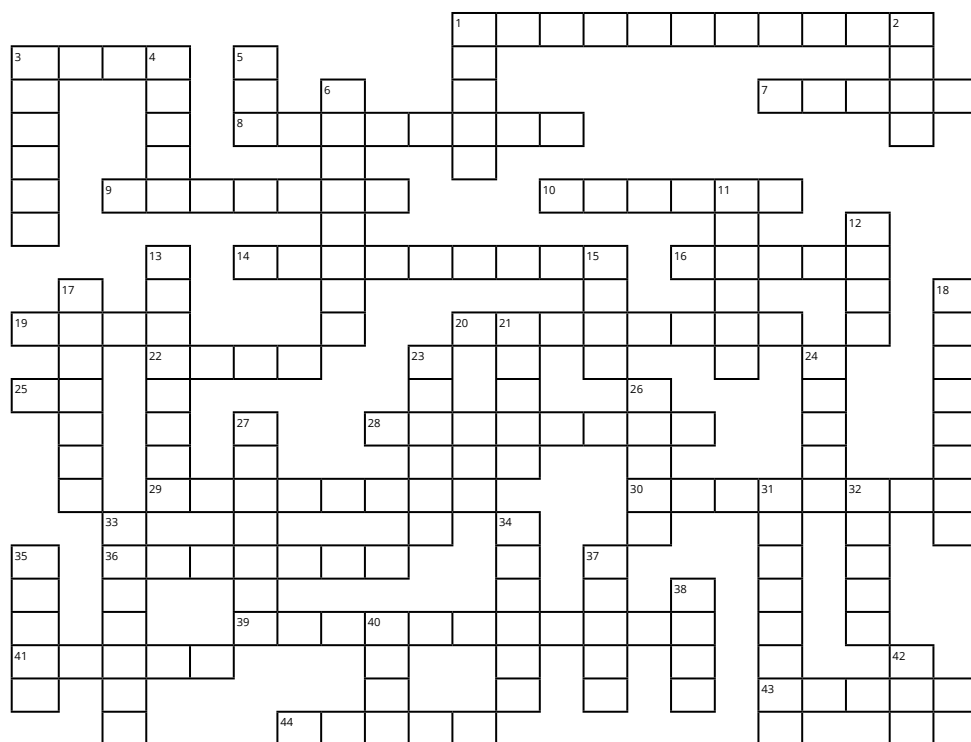


# Test your knowledge

All of the answers can be found in this issue of Quest



**ACROSS**

1. SARS-CoV-2 is one of these
3. An acronym relating to phytoplankton blooms
7. An early warning system for major animal diseases
8. The mineral form of calcium fluoride
9. A prolonged period of low rainfall
10. Describes a Jupiter day
14. An approach used to address disease threats
16. An indigenous knowledge app for drought warnings
19. A NASA mission to Jupiter
20. An archaeological site in the Cradle of Humankind
22. The ocean colour sensor on the Sentinel-3 satellites
25. One of Jupiter's moons
28. This element is in high demand for energy-storage batteries
29. The most common cause of irreversible blindness
30. A disease transmitted from animals to humans
36. Common name for an algal bloom caused by dinoflagellates
39. These \_\_ pipes are a rich source of V<sub>2</sub>O<sub>5</sub>
41. The National Oceans and Coastal Information Management System
43. South Africa's Antarctic base
44. This emerging disease has caused outbreaks of severe haemorrhagic fever in Africa

**DOWN**

1. The current pandemic \_\_19
2. Acronym for South Africa's weather forecasting agency
3. A solvent with six carbon atoms
4. A type of flare that affects space weather
5. Acronym for the frequency band of waves in the magnetosphere
6. The Rustenburg Layered Suite is part of the \_\_ Complex
11. The part of a plant that produces pollen
12. An emerging disease caused by a mosquito-borne virus
13. The eThekweni FEWS provides warnings for this
15. The genus that humans belong to
17. The southern lights are an \_\_ display
18. A weather prediction
21. SuperDARN uses this technology
23. Describes a gas of ions and free electrons
24. Prefix for a type of photosynthetic bacteria
26. Artificial intelligence systems may use \_\_ logic
27. Semiconducting nanocrystals that can be used for biolabelling
31. An autopsy conducted on animals
32. South Africa's space agency
33. Part of the skull
34. The opposite of El Niño
35. Refers to an oxidation-reduction reaction, used in VRBs
37. The H1N1 influenza pandemic was known as \_\_ flu
38. A coronavirus disease associated with camels
40. A prefix meaning very small, or a millionth of a millimetre
42. Jupiter is known as a \_\_ giant planet

## QUEST MATHS PUZZLE NO. 53

You are a prisoner sentenced to death. The Emperor offers you a chance to live by playing a simple game. He gives you 50 black marbles, 50 white marbles and 2 empty bowls. He then says, "Divide these 100 marbles into these 2 bowls. You can divide them any way you like as long as you use all the marbles. Then I will blindfold you and mix the bowls around. You then can choose one bowl and remove ONE marble. If the marble is WHITE you will live, but if the marble is BLACK... you will die."

How do you divide the marbles up so that you have the greatest probability of choosing a WHITE marble?

**Answer to Maths Puzzle no. 52**

- a) Paint the small cubes.
- b) Choose whichever option you wish, they're both equally expensive.
- c) Paint the big cube.

## WIN A PRIZE!

Send us your answer (fax, e-mail or snail-mail) together with your name and contact details by 15:00 on 31 August 2020.

**THE FIRST CORRECT ENTRY THAT WE OPEN WILL BE THE LUCKY WINNER. WE'LL SEND YOU A COOL 'TRULY SCIENTIFIC' CALCULATOR!**

Mark your answer 'Quest Maths Puzzle no. 53' and send it to:  
**Fax:** 086 671 0953 **E-mail:** info@livingmaths.com.  
**Snail-mail:** Quest Maths Puzzle, Living Maths, P.O. Box 195, Bergvliet 7864, Cape Town, South Africa



For more on Living Maths phone 082 360 0076 and visit [www.livingmaths.com](http://www.livingmaths.com)

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