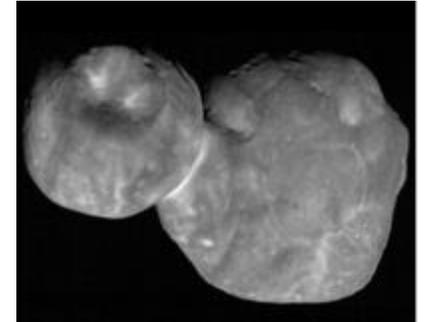


# Science Table Quiz 2019



# Science in the last year

1. November 2018 – the UN announced that what was shrinking more rapidly than expected?
2. January: The *New Horizons* space probe flew past which distant object?
3. February: Scientists reported the creation of mice with what sort of vision?
4. April: Astronomers released the first ever image of what sort of object?
5. May: Scientists in Chicago observed what at  $-23^{\circ}\text{C}$  (an increase of  $50^{\circ}$  over the previous record)?
6. July: Carnegie Mellon Univ reported an artificial intelligence that can beat leading professionals at what card game?
7. August: Fossil remains were discovered in New Zealand of a giant species of what type of bird (1m tall, 7 Kg)
8. Chemists announced that they had made a ring molecule consisting only of carbon atoms. How many atoms did it contain?
9. October: The Nobel Prize in Medicine was awarded for work on the regulation of what at the cellular level?
10. (No marks for table ? & ?) John Goodenough *et al* received the Nobel Prize in Chemistry for developing which ubiquitous device?



# Combating Climate Change

Earth Day Network's 10 things you can do. Simply put them in the order they put them, most important = 1, next = 2 etc

- A. **Show your support** - get involved in local green initiatives & activities
- B. **Invest/Divest** – find out where your university, employer etc invests eg its Pension Fund. Push for greater sustainability
- C. **Organise** – use your communities (sports teams, church, PTA...)
- D. **Vote Earth** – engage your local candidates – what are their environmental priorities?
- E. **Shop Smarter** – support companies with a good environmental record. Shop to minimise waste.
- F. **One bite at a time** – eat less meat, dairy, eggs. Minimise food waste. Compost scraps
- G. **Travel smarter** – use public transport, cycling, walking whenever possible
- H. **Unplug** – turn things off when you're not using them, turn down the thermostat, use energy efficient goods, use renewables if you can
- I. **Hold yourself accountable** – calculate your own carbon footprint (& do something about it)
- J. **Get informed** – learn about the science. Knowledge is Power!



# The Periodic Table

1. Mendeleev successfully predicted the properties of two previously unknown elements he called eka-aluminium and eka-silicon. What do we call them now?
2. As 2019 has been called the year of the periodic table, what elements have atomic numbers 20 and 19?
3. And as Mendeleev published it in 1869, what elements have atomic numbers 18 and 69?
4. For Douglas Adams fans, what element has atomic number 42?
5. Which village in Sweden has four elements (including one of the answers to Question 3) named after it?
6. Two letters in the English alphabet do not appear on the Periodic Table. One is Q – what is the other?
7. Currently the heaviest named element is number 118, Og. What does this stand for? And which element is it below in the table?
8. What two elements are directly below copper?
9. How many naturally occurring elements are liquid at room temperature (STP)?
10. And are any pair of them adjacent on the periodic table?



Period	Gruppo I. R <sup>1</sup>	Gruppo II. R <sup>2</sup>	Gruppo III. R <sup>3</sup>	Gruppo IV. R <sup>4</sup>	Gruppo V. R <sup>5</sup>	Gruppo VI. R <sup>6</sup>	Gruppo VII. R <sup>7</sup>	Gruppo VIII. R <sup>8</sup>
1	H=1							
2	Li=7	Be=9,4	B=11	C=12	N=14	O=16	F=19	
3	Na=23	Mg=24	Al=27,8	Si=28	P=31	S=32	Cl=35,5	
4	K=39	Ca=40	—=44	Ti=48	V=51	Cr=52	Mn=55	Fe=56, Co=59, Ni=59, Cu=63.
5	(Cu=63)	Zn=65	—=68	—=72	As=75	Se=78	Br=80	
6	Rb=85	Sr=87	Yt=88	Zr=90	Nb=94	Mo=96	—=100	Ru=101, Rh=104, Pd=106, Ag=108.
7	(Ag=108)	Cd=112	In=113	Sn=118	Sb=122	Te=125	J=127	
8	Cs=133	Ba=137	?Di=138	?Co=140	—	—	—	—
9	(—)	—	—	—	—	—	—	—
10	—	—	?Er=178	?La=180	Ta=182	W=184	—	Os=195, Ir=197, Pt=198, Au=199.
11	(Au=199)	Hg=200	Tl=204	Pb=207	Bi=208	—	—	—
12	—	—	—	Th=231	—	U=240	—	—



# Deer and Antelopes



1



2



3



4



5



6



7



8



9



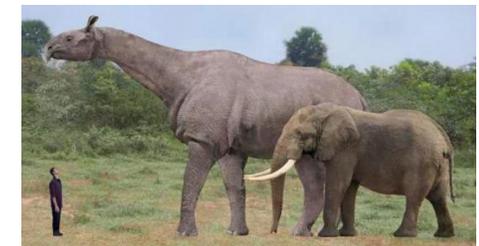
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Answers come from: Caribou, Dik Dik, Eland, Elk/Wapiti, Grant's Gazelle, Moose, Muntjac, Nilgai, Pronghorn, Red Deer, Reindeer, Roe Deer, Saiga, Wildebeest

**Bonus point:** One of these is not actually a deer or an antelope. Which one? And what family does it belong to?

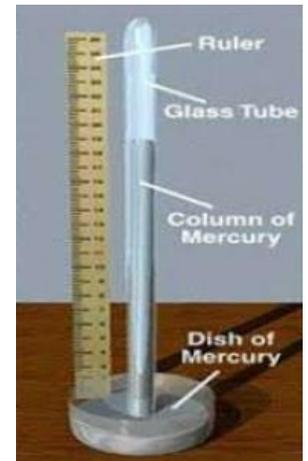
# Archaeology and Palaeontology

1. In 2010 in Russia the remains of s species of human that lived alongside Neanderthals and modern humans. What are these people called?
2. In June Irish archaeologists discovered a megalithic monument in which county?
3. How many dinosaur fossils have been discovered in Ireland?
4. In which three countries have the most dinosaur fossils been found?
5. A woodhenge monument was discovered in which continental European country in 2016? (Maybe the first henge outside the British Isles)
6. Who led the excavations at Knossos ca 1900?
7. And who led the excavation of Tutankhamun's tomb in 1922?
8. What famous fossil was found in 1860 in Solnhofen, Germany?
9. The largest ever land mammal known is probably *Paraceratherium* – which is most closely related to which modern mammals?
10. On which Indonesian island were fossils of a dwarf species of human found in 2014?



# Maths, IT, Physics & Engineering

1. If  $3x^2 - x - 10 = 0$ , what are the two values of  $x$ ?
2. What is the SI unit of impedance?
3. What does HDMI stand for?
4. Which world record does the ThrustSSC hold?
5. Which is bigger: the cube root of 3 or the square root of 2?
6. Google recently claimed to have achieved quantum “supremacy” with a processor named after what type of tree?
7. In a mercury barometer, what is the empty space above the meniscus called?
8. Which rocket did NASA use for its manned moon missions and launching Skylab?
9. Series of the type  $1 + x + x^2/2! + x^3/3! + \text{etc}$  are named after which Scottish mathematician?
10. There are plans to use which type of waves instead of microwaves for communication within 5G cells?



# Common trees

1. A\* *Fraxinus excelsior* large, deciduous, member of the Olive family
2. B\* *Betula pendula* small, thin leaved, deciduous hardwood
3. C\* *Prunus avium* deciduous, edible fruit
4. D\* F\* *Pseudotsuga menziesii* evergreen
5. E\* *Ulmus minor*
6. H\* C\* *Aesculus hippocastanum*
7. J\* Conifer with fleshy fruit-like cones
8. L\* *Tilia europaea* large deciduous
9. S\* P\* Conifer
10. C\* s\* t\* w\* f\* t\*



# Women in STEM



1



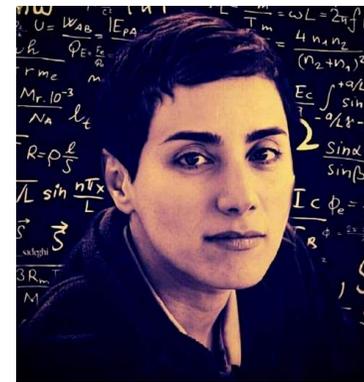
2



3



4



5



(half a mark for why she is famous)



6



7



8



9

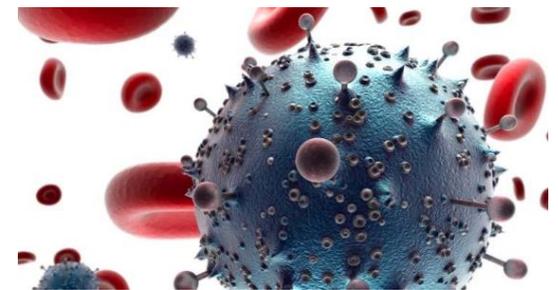
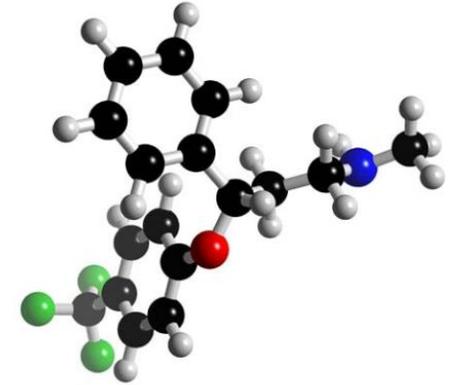


10



etcetera

1. Which Hurricane (by then a Storm) hit the UK and Ireland in early October?
2. To the nearest degree, how far is the earth's axis of rotation tilted from vertical wrt the solar plane?
3. How many pairs of ribs do humans generally have?
4. How is the drug fluoxetine better known commercially?
5. In organic chemistry, what compounds can be prepared by the oxidation of primary alcohols or the reduction of carboxylic acids?
6. The Kuroshio current in the North Pacific is the equivalent to what in the North Atlantic?
7. *Armillaria ostoyae* is thought to be the largest living organism in the world (2.4 miles across). Which kingdom of organisms does it belong to?
8. Which planet in the Solar System is currently believed to have the most moons?
9. How is the condition Hypermetropia better known?
10. What do the abbreviations HIV and AIDS actually stand for?



# Science Fiction

1. Which Science Fiction this year became the highest grossing film of all time?
2. How many people generally accompany the latest Dr Who on her adventures?
3. According to the Quora platform, what is the best selling Science Fiction book of all time?
4. And which 2008 book (2012 film) is in second place?
5. Who played Jean-Luc Picard in “Star Trek, the Next Generation”?
6. What will Star Wars Episode IX, due for release next month, be called?
7. Who is Superman’s girlfriend and Clark Kent’s co-worker on “The Daily Planet”?
8. What is the title of Margaret Atwood’s sequel to “The Handmaid’s Tale”?
9. Who wrote “Consider Phlebas” and other Culture series novels?
10. How many “Jurassic Park/Jurassic World” films have there been?

