MENSA INTERNATIONAL

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what's in the mwj this month...

- like to be involved with members from your 'twin town' across the world? Check p2 for details.
- on p3, **Peter Fröhler** tells us how his national Mensa, Germany, has fared during the pandemic.
- the Mensa International Photographer of the Year 2020 is announced on p4. Congratulations to all the finalists and special congratulations to the winner, Mensa Czech Republic's **Martin Sivak** whose entry was entitled *"I won't be photographed"*.
- thank you to all the members who have already sent in an entry for the MWJ Poetry Competition 2021. There's still time, however, for many more entries to come in; the rules are on p4.
- on p7, our Member Profile this month features **Bernhard Weidinger** and on p8, our Features Editor brings us recent research into how our brains began to grow.
- on page 9, there's an article about how women can read minds better than men, thus being able to put themselves in someone else's shoes better than men can...
- on p10, our Science guru, **John Blinke**, walks around his home with his UV Beast ultraviolet flashlight with some startling results, while **Therese Moodie-Bloom's** Teasers are on p12.

Kate Nacard, Editor

Download the full-colour MWJ each month from www.mensa.org

Cover: "Hidden" by Wojciech Woszczyk of Mensa Poland: second place in the 2020 Mensa International Photography competition (see p4).

what does Mensa mean to me?

MENSA TWIN TOWNS *Get involved!*

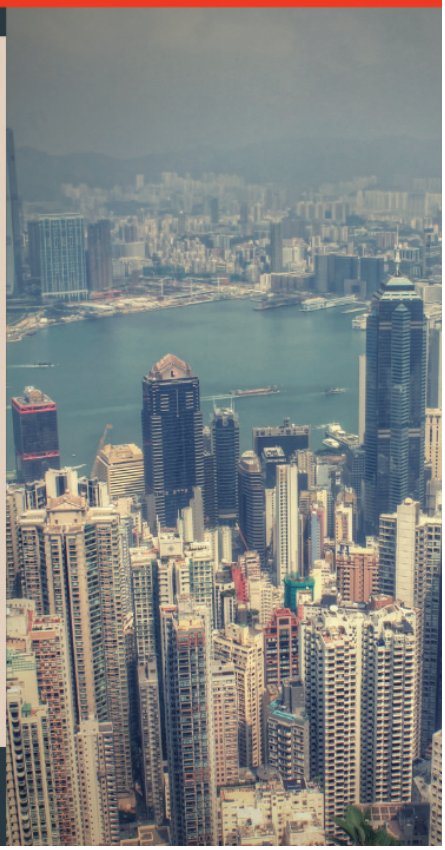
what is it?

The Mensa Twin Towns project is officially up and running!
The goal of this project is to help Mensans to meet with each other, have fun and discover other cultures. We are a social organisation after all!

who is involved?

So far a few different regions are on board: Taipei & Adelaide, New York & Paris, Mikkeli & Belgrade, Tampere & Lille, Ireland & Boston.
Each group meets online about once a month. It's a great way for us to practise language skills and see how other Mensas operate. What do we eat, where do we live, what jobs do we have? One day we may even meet face to face.
A group can be a town, city, region or even a country. Would your region like to get involved?

Email us: twintowns@mensa.fi



Peter Fröhler

FROM THE EXCOMM

Pandemic challenges

When the first consequences of the pandemic hit us in Germany last year, the plans for our annual gathering in April were pretty much finished. Hundreds of Ms had booked their hotel rooms, had signed up for many different events and had paid their registration and other fees. All of this had to be cancelled and the payments were generally refunded. The organising committee was also successful in recovering all down-payments for the different event locations, restaurants and hotels.

Other Mensa events also had to be cancelled except for those that took place outdoors, but even those eventually fell victim to the pandemic. Fortunately our MY (Mensa Youth, 18-30 years) had developed an online platform for cyber meetings which was opened up to the entire membership in response to the shut down. A number of volunteers are managing this cyberspace similar to the way we service members in geographical areas. Online events are planned and entered into our Events calendar and online meetings are organized on a regular basis. While all of this works quite smoothly, we all miss our normal life with the old-fashioned events and real life meetings as we used to know them.

As part of our annual gathering, our annual general meeting obviously also had to be cancelled. After careful consideration the German Mensa Board decided to postpone all issues to be discussed at that meeting to the 2021 meeting. At that time we were still hoping for a normal 2021 annual gathering, but as we all now know, this was also not possible. Fortunately and contrary to last year, we had enough lead time so that the cancellation of the events was much less problematic.

That left us with the challenge of organising our annual business meeting in one form or other. Consequently, we have been preparing for a hybrid annual meeting, where a small group of members are going to be present at the meeting location while the large majority of participants will join the meeting online. For that purpose we had to find a solution that would allow us to validate the participants as members in good standing and permit us to vote on motions and other meeting business. In order to avoid complications we have opted for all voting to be done online, even by those who are physically present. We have decided to use *OpenSlides* and we have contracted a company to assist us so that we can ensure a smooth operation of all aspects of the meeting.

Among those to be physically present at the meeting will have to be our election committee, as they will have to tally and announce the voting results for our new board, as well as for one financial auditor and an ombudsman. There will also be some of the current board members, two meeting moderators, someone to write the minutes as well as technical staff and organizers. Overall physical participation will be kept to a minimum in a large meeting location so that proper distancing and all other

(continued on p04)

(continued from p03)

pandemic requirements can be fully met.

By the time you read this our meeting will be history and I hope that everything will have worked as planned. For the longer term I sincerely hope that we all can soon have our old good lives back and leave the pandemic behind.

Peter Fröhler
Mensa Germany

MWJ INTERNATIONAL POETRY COMPETITION 2021

Members are invited to submit their original poems to the editor, mwjeditor@mensa.org, by August 1, 2021.

Poems are to be previously unpublished and no longer than 30 lines in length. The theme for the competition is ***Reflection.*** All entries must be in English and following the judges' decision, no correspondence will be entered into.

By submitting an entry (maximum of one entry) into the competition, members understand that their poem may be published in the *Mensa World Journal* or in any other National Mensa journal at the editors' discretion. The author will, of course, be acknowledged.

As all entrants will be checked for current membership, your entry will be invalid if you don't include your country of membership and membership number with your entry.

Mensa International Photographer of the Year 2020.

Congratulations to Martin Sivak of the Czech Republic for his winning entry "I won't be photographed" (below).

Second place: "Hidden" by Wojciech Woszczyk of Mensa Poland (see front cover)

(at left) fourth place: "The Shy Romantic" by Kim Pullon, Australia

Third place: "Mina (cache son frele buste)" by David Barthelemy, France (below).

The theme for the competition was 'Shyness', and many entries were received from around the Mensa world.

The other place-getters included "Out There" by Sabine Marieni (Germany); "Lost Courage at Last Moment" by Donat Kamber (Switzerland); "Life in a Box" by Dag Thrane (Norway); "Mommy, there are Strangers" by Andres Suarez Velazquez (Spain), and, "Timid Squirrel" by Victor Vas (Great Britain).

Congratulations to all!

Ancient skeletal hand could reveal evolutionary secrets...

Evolutionary expert Charles Darwin and others recognized a close evolutionary relationship between humans, chimps and gorillas based on their shared anatomies, raising some big questions: how are humans related to other primates, and exactly how did early humans move around? Research by a Texas A&M University professor may provide some answers.

Thomas Cody Prang, assistant professor of anthropology, and colleagues examined the skeletal remains of Ardipithecus ramidus ("Ardi"), dated to 4.4 million years old and found in Ethiopia. One of Ardi's hands was exceptionally well-preserved.

The researchers compared the shape of Ardi's hand to hundreds of other hand specimens representing recent humans, apes and monkeys (measured from bones in museum collections around the world) to make comparisons about the kind of locomotor behaviour used by the earliest hominins (fossil human relatives).

The results provide clues about how early humans began to walk upright and make similar movements that all humans perform today.

This discovery is described in a study published in the current issue of *Science Advances*.

"Bone shape reflects adaptation to particular habits or lifestyles - for example the movement of primates - and by drawing connections between bone shape and behavior among living forms, we can make inferences about the behavior of extinct species, such as Ardi, that we can't directly observe." Prang said.

"Additionally, we found evidence for a big evolutionary 'jump' between the kind of hand represented by Ardi and all later hominin hands, including that of Lucy's species (a famous 3.2 million-year-old well-preserved skeleton found in the same area in the 1970s). This 'evolutionary jump' happens at a critical time when hominins are evolving adaptations to a more human-like form of upright walking, and the earliest evidence for hominin stone-tool manufacture and stone-tool use, such as cut-marks on animal fossils, are discovered."

Prang said the fact that Ardi represents an earlier phase of human evolutionary history is important because it potentially shines light on the kind of ancestor from which humans and chimpanzees evolved.

"Our study supports a classic idea first proposed by Charles Darwin in 1871, when he had no fossils or understanding of genetics, that the use of the hands and upper limbs for manipulation appeared in early human relatives in connection with upright walking," he said. "The evolution of human hands and feet probably happened in a correlated fashion."

Since Ardi is such an ancient species, it might retain skeletal features that were present in the last common ancestor of humans and chimpanzees. If this is true, it could help researchers place the origin of the human lineage - in addition to upright walking - into a clearer light.

"It potentially brings us one step closer to an explanation for how and why humans evolved our form of upright walking," Prang said.

He added that the big change in hand anatomy between Ardi and all later hominins occurs at a time, roughly between 4.4 and 3.3 million years ago, coinciding with the earliest evidence of the loss of a grasping big toe in human evolution. This also coincides with the earliest known stone tools and stone cut-marked animal fossils.

He said it appears to mark a major change in the lifestyle and behavior of human relatives within this timeframe.

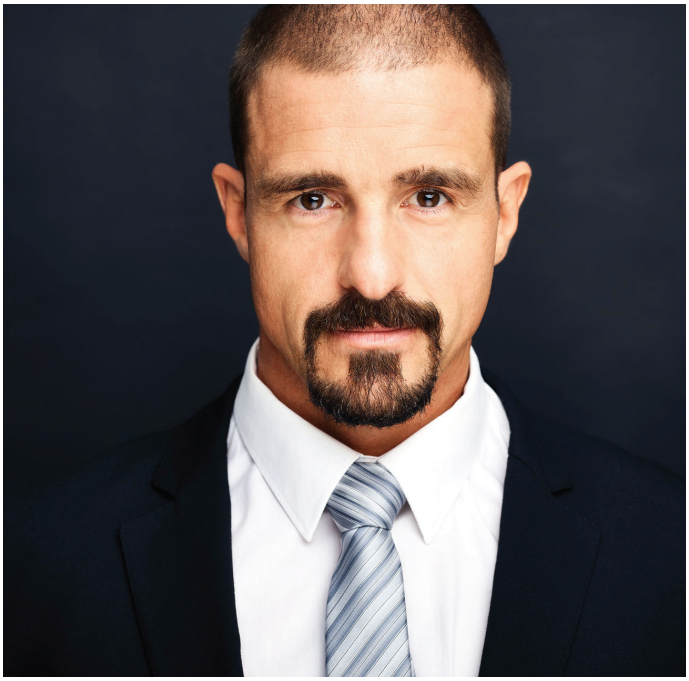
"We propose that it involves the evolution of more advanced upright walking, which enabled human hands to be modified by the evolutionary process for enhanced manual manipulation, possibly involving stone tools," Prang said.

This research was funded by the Wenner Gren Foundation.

sciencedaily.com February 25, 2021

MEMBER PROFILE

by Susan Jensen



Bernhard Weidinger, of Mensa Austria, keeps expanding his life, in ever-widening interconnected circles, even during COVID lockdown. His interests in business and religion led to political involvement, which led to his becoming deeply involved the past year with Safersurfing (www.safersurfing.org).

As Head of Public Affairs for Safersurfing, Bernhard is on the front lines of an EU-wide attempt to protect children from pornography, increase the providers' accountability for pornographic content and push for the recognition of porn addiction as an official disease.

Bernhard, aged 40, was raised in the picturesque town of Linz, Austria. An excellent student, he obtained a master's degree in Banking and Finance from the University of Applied Science and a master's degree from the University of Business Administration and Economics, with emphasis on Corporate Finance and Entrepreneurship. During his studies he attended exchange programs in Germany, Australia, Ukraine and Russia. In the northern hemisphere summer 2021, he is going to receive his bachelor's degree in Philosophy from the State University of Vienna.

After his final academic BA semester in Moscow, he started at a prestigious Russian advisory firm in St.Petersburg as Head of Mergers & Acquisitions, leading the corporate finance department for the next four years. He founded the local chapter of the Junior Chamber International (a subsidiary of the UNO) in St Petersburg, which remains the leading networking organization for young entrepreneurs in the region. After his term as President of JCI Spb, he was elected as Chairman of the Steering Group of the Association of European Businesses in Russia (www.aebrus.ru).

Upon returning to Vienna nine years ago, Bernhard, together with three mathematicians, founded a tech start-up, providing optimization technology. In 2016 he sold his stake and went abroad again as advisor for the automotive industry.

Three years ago, he joined Mensa Austria and met member Martin Hubinger who felt Bernhard's unique background was a perfect match with his company PJI Invest. Bernhard is now a partner in PJI Invest and responsible for investor relations. Based on a smart village concept, the company markets land slots to distinguished investors from the upper class. Bernhard and Martin fell in love with the warm climate and international flavour of Puntas de Jose Ignacio, Uruguay, and would like to develop an international compound there, perhaps where Mensans can vacation and/or live.

Bernhard has a special interest in how the mind and spirit integrate. He is part of a worldwide movement www.exodus90.com, a 90-day spiritual exercise. His studies of cognitive science helped him grasp the addictive quality of pornography, which creates a high similar to heroin. He also understands the way the brain becomes attenuated so quickly to this stimulus that ever greater stimuli, with more extremism, is needed to get the same 'rush'.

how the human brain grew...

by Inham Hassen

New studies illustrate how the human brain grew as our survival needs changed.

Neanderthals are a subspecies of humans who lived around 300,000 years ago. Many scientists consider them as the closest ancestors to us. However, Neanderthals are generally perceived as primitive beings who relied on brutish tactics to hunt their prey. New research, published in February this year by a team from State University of New York in Binghamton and Universidad Complutense de Madrid suggests otherwise.

For a long time, anthropologists had evidence to suggest that Neanderthals were capable of hunting, gathering food and carrying out basic communications. However, it was not very clear to what extent they could communicate with each other. Using high resolution CT scans to create virtual 3D models, the researchers identified that Neanderthals had hearing abilities up to 5 kilohertz, which encompasses most of the frequency range of modern human speech sounds.

In addition, the scientists were also able to calculate the frequency range of maximum sensitivity, (technically referred to as the occupied bandwidth) in the species, which was much higher than previously thought. This indicated that the Neanderthals possessed a communication system that was complex and efficient. Almost as complex as modern human speech, which indicates that they were not as 'brutish' and 'primitive' as we imagined.

If early humans had better cognitive ability than we believed, what might have caused it? The answer to this question may have been found in a different study, also published in 2021, by two professors of Archaeology from Tel Aviv University.

Scientists have known for a long time that the brain size of early humans and their ancestors almost doubled during the evolutionary process – roughly from 650 cc to 1,500 cc. - and the size of the brain is robustly associated with higher IQ, which in turn, enables advanced cognition, decision-making and articulate communication. However, the reason behind such growth of the brains in early ancestors of humans has been a subject of much debate.

The researchers from Tel Aviv University shed new light on this question. In Africa, 2.6 million years ago, when humans first emerged, the average size of land mammals was close to 500 kg. Throughout millennia, this figure decreased by over 90% to several tens of kilograms. The extinction of massive species forced humans to display tact and boldness, which demanded an increase in the volume of the brain, as smaller animals were swifter. For example, the need to hunt dozens of gazelles instead of one elephant, generated prolonged pressure on the brain's functioning ability. This also led to the development of more articulate communication to enable the exchange of information, as evidenced by the Binghamton study.

If that was the case, did the agricultural revolution reverse this process? In fact, as humans became farmers, it was observed that the brain size reduced roughly to around 1,400 cc, which is the current average volume of a human brain.

The need for allocating brain energy for tasks such as fleeing from prey and hunting was no longer needed as we formed civilizations.

Both the Tel-Aviv and Binghamton studies converge to one important phenomenon. Human IQ appears to grow as the demand for survival becomes a challenge. As we face new threats arising from the need to survive from microscopic pathogens that appear to mutate quicker than we can imagine, we can be fairly certain that the natural evolutionary process of the human brain will prepare us for the fight.

Women Better at Reading Minds Than Men

Psychologists at the universities of Bath, Cardiff, and London have developed the first ever 'mind-reading questionnaire' to assess how well people understand what others are really thinking.

A new approach to 'mind-reading' has been developed by researchers at the universities of Bath, Cardiff, and London to improve how well we understand what others are thinking. And it transpires that women are much better than men at putting themselves in someone else's shoes.

Mind-reading, sometimes referred to in psychology as 'mentalising', is an important ability enabling us to pick up on subtle behavioural cues that might indicate that someone we are speaking to is thinking something that they are not saying (e.g. being sarcastic or even lying).

The researchers say that we all have different mind-reading abilities, with some of us inherently better than others. The fact that not all of us are good at mind-reading can cause challenges—in particular for people with autism where it can lead to social struggles in building or maintaining relationships.

To identify those people who have difficulties and to provide them with appropriate support, the team at Bath designed a new mind-reading test, which draws on data from over 4,000 autistic and non-autistic people in the UK and US.

Results from their simple, four-step questionnaire were scored, ranging from 4 to 16 (with 4 indicating poor mind-reading abilities; 16 indicating excellent abilities). The average score for their questionnaire was between 12 and 13. After statistically confirming that the test was measuring the same thing in men and women, they found that females reported better mind-reading than males, whilst also confirming some of the well-reported social challenges faced by the autistic community.

Their method, which uses just four questions to assess individuals, is published, along with their research findings, in the journal *Psychological Assessment*.

Dr. Punit Shah, senior author of the study and leading expert on social cognitive processing at the University of Bath's Department of Psychology explained: "We will all undoubtedly have had experiences where we have felt we have not connected with other people we are talking to, where we've perceived that they have failed to understand us, or where things we've said have been taken the wrong way. Much of how we communicate relies on our understanding of what others are thinking, yet this is a surprisingly complex process that not everyone can do.

"To understand this psychological process, we needed to separate mind-reading from empathy. Mind-reading refers to understanding what other people are thinking, whereas empathy is all about understanding what others are feeling. The difference might seem subtle but is critically important and involves very different brain networks. By focussing carefully on measuring mind-reading, without confusing it with empathy, we are confident that we have just measured mind-reading. And, when doing this, we consistently find that females reported greater mind-reading abilities than their male counterparts."

Lead researcher, Rachel Clutterbuck, emphasised the clinical importance of the questionnaire. She said: "This new test, which takes under a minute to complete, has important utility in clinical settings. It is not always obvious if someone is experiencing difficulties understanding and responding to others—and many people have learnt techniques which can reduce the appearance of social difficulties, even though these remain.

"This work has great potential to better understand the lived experience of people with mind-reading difficulties, such as those with autism, whilst producing a precise quantitative score that may be used by clinicians to identify individuals who may benefit from interventions."

Dr. Shah added: "This research has been about understanding more about our mind-reading abilities and providing solutions to those who might struggle, particularly the autistic community. We have created a freely available questionnaire which we hope can help identify people who are experiencing mental difficulties relevant to social situations."

Neurosciencenews.com
February 14, 2021

supplementally...

by John Blinke

The Glow

Scientists are finding that a lot of things glow when illuminated with ultraviolet light. Atoms often absorb light and then radiate it at a lower frequency. Lately, they found that platypus fur glows under UV. People wonder how the creature benefits. I think those guys never take the time to fool around with an ultraviolet flashlight. When you play with one of those, you see that many things glow for no particular reason. So, why shouldn't animal fur glow? The phenomenon does not have to be functional. More likely, it is an accidental byproduct of other qualities. If it doesn't stop a critter from reproducing, there is no reason not to glow!

To put my money where my mouth is, so to speak, I am walking around with my UV Beast ultraviolet flashlight. I notice that anything meant to be bright white is VERY bright blue-white with UV shining on it. That includes ink jet printer paper and white cotton clothing. I suspect this is due to the wide use of titanium dioxide as a whitener in paints, inks, paper products. Day glow stickers of any colour are dazzling, but I don't know what chemicals do that.

In the bedroom, white sheets are brilliant blue-white while coloured sheets are subdued. The luminous screen on my old BK oscilloscope is especially bright green. (What? Of course I have an oscilloscope in my bedroom. Don't you?) The screen is meant to glow when excited by a beam of electrons and I guess the UV light is close enough.

In the kitchen, I opened the fridge and held the door button to keep the light off. A white LED bulb in there glows a nice cherry colour. In the back of the shelf is a large container of pink grapefruit that looks thoroughly tasty in normal light. But in UV - do I eat that stuff? It looks putrid.

In the workshop (oh, OK, the living room) there is a compartmented plastic box holding an assortment of steel washers. The plastic glows a beautiful transparent blue. It's really nice. The shiny metal washers inside are boring. They look much as they do in daylight. Hair shampoo glows such a brilliant green it could be battery powered! Curly compact fluorescent light bulbs have a candy orange colour.

Looking at my personal self, my white hair glows a couple of different shades of blueish-white and greenish. Or, maybe it is reflecting the colour of the LEDs in my UV flashlight. My skin is dull, but an old surgical scar is lurid pink. My fingernails are transparent blue, my palms are mottled pink and the backs of my hands look red and raw. (From lots of COVID hand washing, I guess.)

Two plastic laundry baskets are identical in daylight. But in UV, one looks orange-pink and the other blue-white. A Formica counter top looks pink when it is really yellow. The carpet — oh gosh — I really should vacuum sometime because I can see every bit of lint!

Sauropod Origins

Science News, December 19, 2020. "Altered Plant Life May Have Benefitted the Giant Dinosaurs."

How did giant sauropods become the ubiquitous cows of the Triassic? A very early specimen suggests that a radical climate shift gave them an opening. It seems that epic volcanism in the southern hemisphere 184 million years ago caused changes that made it hard for easy-to-chew cycads and seed ferns to continue dominating the land. The conifers that took over could only be eaten by creatures that were able to chew and digest the comparatively tough foliage. Sauropods were up to the task. Their spoon-shaped teeth could effectively munch pine branches while their enormous guts could hold vast quantities of vegetation while it fermented.

Lithium Iron

Eurekalert, January 18, 2021. "Inexpensive Battery Charges Rapidly For Electric Vehicles, Reduces Range Anxiety." (Nature Energy)

Range anxiety and lengthy charging times make people hesitate to buy electric vehicles. A new kind of lithium battery being developed at Penn State promises to beat these problems and deliver a cheaper product in a smaller package. It is a lithium iron phosphate battery. A key feature is a ribbon of nickel metal that acts as a heating element to quickly bring the entire battery to 140F, which is its optimal tempera-

ture for a fast charge. It can then charge in ten minutes and the driver can get back on the road. The researchers promise 300 kilowatts of power which should deliver a 250 mile range. The battery will not use cobalt as some other high capacity lithium batteries do.

Too Big

Science News, January 18, 2021. "The Most Ancient Supermassive Black Hole Is Bafflingly Big."

If you dump matter into a black hole, you get a bigger one. But there is a limit to how fast black holes can consume stars and there has been a finite time since the Big Bang. So the discovery of a distant, supermassive black hole as heavy as 1.6 billion suns is a problem. There was not enough time for it to grow that big by eating stars. Astronomers can think of two possible scenarios: The monster might have collapsed out of primordial hydrogen. Or perhaps there is some unknown way for black holes to eat stars faster.

Darwin's Ponds

Yale News, January 4, 2021. "Ancient Earth May Have Birthed Islands Of Life." Charles Darwin thought life could have begun ages ago when chemicals lingered in warm little ponds for millions of years. The problem is that the entire earth was covered in oceans during the time when life must have got started. There were no warm little ponds, just deep seas. But scientists at Yale and the Ensenada Center for Scientific Research and Higher Education in Mexico have produced a model of early Earth that allowed some dry land features during the Archean eon about 4 billion years ago.

John Blinke

Writing for the MWJ

The *Mensa World Journal* is your magazine; by and large, most of the articles are written by Mensans - for Mensans - and the opportunity is there for you to be one of these authors.

Topics can cover reports of Mensa events you've attended, your achievements, unusual hobbies and interests, or your successes.

Please limit your article length to 600 words and send it to me at mwjeditor@mensa.org. Please also include a hi-res photo to accompany the article, your National Mensa and your membership number.

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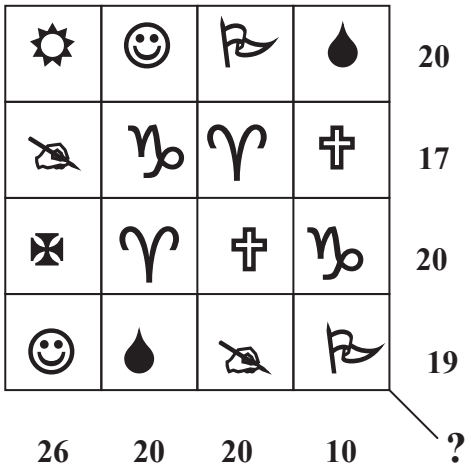
THERESE'S TEASERS

Cryptosum

Each symbol represents a different digit from 1 to 9. The sum of the digits in each row and column is shown. Find the sum of the numbers along the diagonal line from the top left-hand corner.



Cairn

The number on each stone represents the difference between the numbers in the two stones on which it sits. There is a two-digit number in each of the bottom stones, using the digits 0-9 once each.

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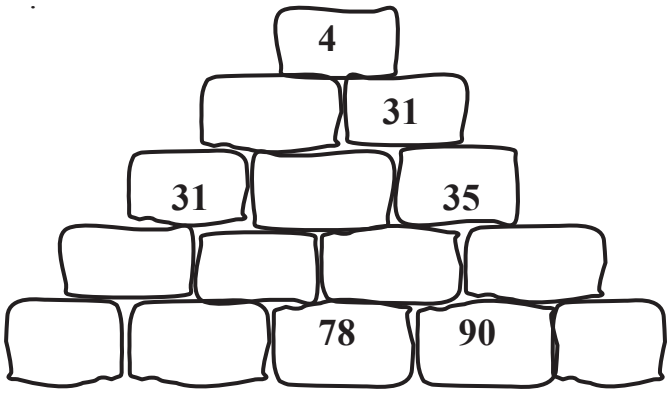

Rebus

Decipher the rebus to find a saying:

Wordplay

* Which kind of poem can have its letters rearranged to spell types of musical compositions?
* Which friend can have its letters rearranged to make a circuit?
* Which health worker can have its letters doctored to form magical symbols?

Cryptic Wordsquare

Each of the following has a 5-letter solution. Place your answers in a 5x5 grid so that 1 Across – 1 Down, 2A = 2D etc.

- Celebs in the sky!
- Principle X, back and forth.
- One is English plant
- Sap will err again
- Medical device; model after gun!

Answers

Cryptosum: *13 (6 + 1 + 2 + 4)* ***Cairn:*** *15 62 78 90 43* ***Rebus:*** *Divide and conquer* ***Wordplay:*** *Sonnet (nonets); Pal / Lap; Nurse / Runes* ***Cryptic Wordsquare: Answers: GRID:*** *Stars Tenet Anise Resin Stent*