Panorama

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Panorama

Issue 2 - 2024

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On the cover: Ahmed, Huda, Faisal, and Feras Al Rushaid and Mai AlMuhaiteeb

Panorama is proud to feature Saudi Aramco employees and their families.



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Intelligent use of Al

The horror images of people with too many fingers produced by AI image bots, and the suggestion to put glue on pizza provided by Google AI to a question about pizza toppings, are reminders of what generative Al bots can and can't do successfully. Using generative Al tools carefully can create great results, reduce workload, and improve quality, but it's important to remember that it is just a tool.

Despite the name "artificial intelligence," AI algorithms and bot programs don't meet the definition of intelligence, which is "the ability to learn or understand from experience, to acquire and retain knowledge, and to respond quickly and effectively to a new situation." They only learn from the information provided to them and they are not able to create completely new ideas in response to entirely new experiences. Al couldn't have painted a "Starry Night" before Vincent van Gogh did, and they aren't good at responding to situations that have never happened before.

That doesn't make AI tools bad. It just means that users need to be aware of their limitations and use them carefully to produce the best outcomes. AI can help organize information such as creating writing outlines and guides. It can summarize large sections of text for quick review, and many travelers use Google Translate's photo function to read signs and plagues while on holidav.

Al can help identify plants and animals photographed during a walk. They can read websites and text out loud, allowing people to do multiple tasks at once or assisting people with a visual disability. ChatGPT can be asked to create a schedule or a daily meal plan based on specific dietary requirements.

Photoshop AI can update or improve photos with color correct and minor additions such as adding magical effects, fixing red eye, and removing background details. Other programs can do talk-to-text transcription, reducing strain from texting, taking guick notes, or capturing a meeting.

AI can also help plan out a garden based on sun and plant options, fit new furniture in a living room, and create unique patterns based on set parameters. NASA uses an Al system to design new tools and equipment that are lightweight and sturdy.

But NASA knows that AI can't tell if what it has designed is adequate or acceptable for the situation. AI has frequently produced designs that are missing attachment points or that defy physics. A team of designers reviews each AI design and rejects the ones that aren't worth testing. They use the tool to develop new patterns, and then apply their expertise to determine effectiveness.

One of the dangers of AI use is that it can cause people to stop reviewing and thinking critically. Research has shown that when people asked ChatGPT to brainstorm a topic for them, they produced fewer options than when they did the brainstorming themselves. The reason for the smaller lists was because the

users relied on the AI results, trusting that the bot had done the best job possible, instead of creating their own lists.

People have submitted papers and documents generated by AI and faced real-world consequences when it was discovered that they hadn't checked facts or even reviewed the information. But as the Google AI has shown, AI can make up information, get things wrong, and not provide the best content.

The answer to these problems is for the user to apply their own creative thinking and critical evaluation skills to the materials produced by the AI tool. Reviewing results, building on them, and sometimes rejecting them offer better outcomes for users than simply relying on the AI results.

Al can be a useful tool for a range of functions, but people need to use it carefully, check its work, and remember that it's just a tool and can't replace creative thinking.

Research has shown that when people asked

ChatGPT

to brainstorm a topic for them, they produced fewer options than when they did the brainstorming themselves



The air we breathe

The quality of the air plays a significant part in people's overall health. Air pollution outside the home is an obvious contributor to poor air quality, but inside air has pollutants that can affect comfort and wellbeing, too.

Even the cleanest home has sources of dust that are not immediately obvious. Apart from dust and particles from pollutants such as smoke, indoor dust also contains particles from microplastics, fungi, mold, metals, and chemicals. Exposure to high concentrations of these can have consequences in the short and long term, such as lung irritation, allergies, asthma, and other health problems.

Air quality

Indoor air quality has deteriorated largely due to two unlikely sources: modern living and better buildings. Most households are filled with synthetics and plastics in furnishings, clothing, personal care products, garden pesticides, and household cleaners – all of which shed tiny particles into the home's atmosphere as they are used.

As much as "half of household dust comes from inside your own home" according to research by Gabriel Filippelli, Executive Director at the Indiana University Environmental Resilience Institute in Bloomington, U.S. "The rest is tracked, carried, or blown into our homes from outside."

Modern houses are built far better than they were decades ago, with window and door seals making houses more airtight. This improvement in house design reduces air exchange with outside air, requiring sufficient mechanical ventilation to ensure a cleaner environment.

Dust busting

One way to improve air quality indoors is by using an air purifier, which draws in air, passes it through a pollutant-catching

filter, and pushes clean air back into the room.

Some air purifiers are designed to remove specific contaminants such as dust, mold, or pet dander. Overall, they can reduce the allergen load in a house, apartment, or a single room, providing a better living environment.

Purifiers can differ in the types of pollutants they remove and how. Different types include activated carbon, electrostatic, ionic, UV, and HEPA. The purifier to choose depends on factors such as cost, effectiveness, and personal preference. It's worth researching different types to see what may be most beneficial in the space you have.

Moisture

As well as purifying the air inside, consider either adding or removing moisture in the air, depending on the climate, air conditioning (AC), and the age and condition of the home. AC can make the air indoors very dry, so consider using a humidifier to put some moisture back into it. Humidifiers add moisture to the air to prevent dryness that can cause irritation and can help treat dryness of the

skin, nose, throat, and lips.

Conversely, if an indoor space feels damp, a dehumidifier will take excess moisture out of the air. Moisture can damage walls, floors, and other parts of a home, and increases the risk of mold, mildew, fungus, and even some insect infestations if allowed to persist. These can cause respiratory problems as spores and more get into the air.

In addition to 'that clammy feeling', signs the air is too damp are a muggy, musty smell, condensation on the inside of windows, and even mold appearing on the walls or in cupboards. If this happens, check that there are no leaks from pipes or the roof and that the AC is running efficiently. Areas of some homes, such as basements, often need a dehumidifier, but walls and floors should be checked that they are properly sealed.

Ensuring good air quality in a home is important for protecting the property and the health of those who live there.



First aid - Trust science, not fiction Andrew, Jacob, Samantha, and Nick Sealover First Aid

In an emergency, when first aid is needed, the immediate response may not always be the best one. This is especially true when relying on information seen in movies, using home remedies, or applying outdated practices and beliefs.

Sucking the venom out of snake wounds, applying butter to burns, or holding the head back to stop a nose bleed all make a bad situation worse.

There are many other myths surrounding first aid that are incorrectly reinforced by popular culture or learned at home.

No butter

For burns, the first treatment is to hold the affected area under cool water. Do not get the butter out of the fridge. Butter has long been believed to relieve the pain of a burn, but all it does is slow the healing process and increase the chance of infection.

First aid for burns is to run cool – not icy – water over the affected area for about 20 minutes or until the pain is eased. If necessary, cover the area with a non-stick sterile dressing. Do not pop any blisters that appear and seek professional medical care for serious burns.

Don't choke

There are a number of things that must be avoided when trying to help someone who may be choking. If someone is choking because something has become stuck in their throat, do not stick a finger in their mouth to clear it, this can force the object further down their throat. If they are coughing, encourage them to continue and don't give them a glass of water if there is a throat blockage. If it is a small child, do not hold them upside down to dislodge the item. These actions will only make the situation worse.

If a person is choking on a blockage, thump them on the back between the shoulder blades. Do this quickly five times. If the item has not been dislodged, use abdominal thrusts, also known as the Heimlich Maneuver. Abdominal thrusts can lead to internal injuries, so blows to the back are the first choice.

If alone and choking, use the self-Heimlich technique by placing a fist above the navel, gripping that fist with the other hand, and using quick, inward and upward thrusts. Another option is to fall stomach-first against a chair back. Continue the maneuver until the item is dispelled, even if coughing starts.

Stinging solution

There is a common myth that urine can alleviate the stinging pain of a jellyfish. It's not true and may make the pain worse. There are far more effective and sanitary ways of treating these stings.

If stung, rinse the area with salt water to remove any remaining tentacles and venom injectors. Be careful not to touch the area, and wash away from other parts of the body to avoid transfer. Tentacles may need to be removed with tweezers or using gloves. Do not rinse the area with fresh water as this may trigger the release of any remaining venom. Once the venom and tentacles have been removed, bathe the affected area in hot water to help to relieve the symptoms. There are some jellyfish sting-reducing products available in the market for purchase, often sold to scuba divers and surfers. If an allergic reaction begins, seek immediate medical attention.

Don't be a cowboy

It's a scene repeated regularly in old western movies. Someone is bitten by a venomous snake, and the hero cuts the site open and sucks out the venom, leading to a miraculous recovery. This is not just ineffective, but it's dangerous and could even be life threatening. Snake bites can be serious, depending on the type of snake, and expert medical assistance must be consulted as quickly as possible.

First aid for any snake bite is to wrap the affected area in bandages to compress the limb or wound area without restricting blood flow. The victim must then move as little as possible, until emergency assistance arrives. Do not use a tourniquet or move the victim unnecessarily, do not wash the wound, and never follow "the Hollywood method."

Pinch the nose

The immediate reaction to seeing someone with a nose bleed is to tell them to hold their head back and look at the sky. This will stop the blood falling to the ground, but will do nothing at all to help the person with the nose bleed. It may even make the situation more stressful as the blood now flows down their throat.

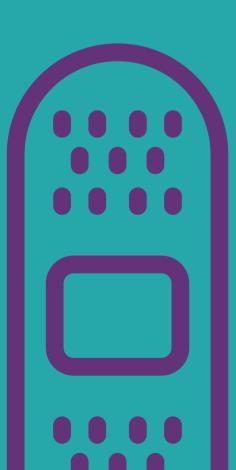
The correct response to a nose bleed is to lean forward and pinch the top of the nose, just below the bridge, for about five minutes. Seek medical help if the bleeding doesn't stop after the second attempt.

Keep it cool

Sprains are a common injury during sporting activities and one common myth is to immediately apply heat to the affected area. Symptoms of a sprain include pain and swelling. Applying heat to the sprain will only make the swelling worse. Instead do the opposite – apply an ice pack (wrapped in a cloth so it doesn't directly contact the skin) and bandage the sprained joint. This will help with both the swelling and pain and support the injured area.

Do the right thing

The first response to any health emergency must be to help the injured person as quickly as possible, but this also needs to be done without causing additional harm. Access to a first aid kit and knowing how to use it are key to doing the right thing in an emergency. When treating an injury before it is seen by a medical professional, make sure to rely on best practice, first aid training, and reliable sources of information.



Essential supplies for a well stocked first aid kit include:

- Absorbent bandage compresses to place over bleeding wound.
- Adhesive bandages in various sizes.
- Adhesive tape to secure wound dressings.
- Antibiotic ointment to apply on wounds prior to dressing.
- Antiseptic wipes to clean wounds and prevent infection.
- Breathing barrier to administer CPR.
- Disposable medical gloves to be worn before giving first aid.
- Elastic bandages to wrap sprains and hold dressings or cold packs in place.
- First aid manual for quick reference on how to treat various injuries.
- Hydrocortisone cream for rashes and insect bites.
- Instant cold packs to reduce the swelling of sprains and fractures.
- Pain relievers such as acetaminophen, ibuprofen, or aspirin.
- Scissors to cut clothing, tape, or bandages.
- Sterile gauze pads and rolls for larger wounds.
- Tweezers to remove splinters or ticks.



Delighting in the desert

For those craving an escape from the pace of daily life, desert camping offers an unforgettable adventure. Imagine setting up camp beneath an endless sky, filled with twinkling stars, where the only sounds you hear are the whispers of the wind and the occasional call of wildlife. This is the magic of the desert, a place to disconnect from the digital world and reconnect with nature and self.

Desert camping is perfect for those seeking a thrill while embracing the simplicity of nature. But before starting this journey, preparation is key.

Start by choosing a location that's both safe and scenic. Look for areas that are not too remote, ensuring access to emergency services if needed, but still far enough to enjoy the solitude. Popular desert camping spots often have established campsites with basic facilities, making them a great choice for first-timers.

Packing the right gear is essential – a tent, a sleeping bag designed for cold nights, and plenty of layers to adjust to the desert's extreme temperatures, hot during the day and chilly at night. Don't forget essentials like a first aid kit, sunscreen, a hat, and sunglasses to protect against the sun's rays. Hydration is crucial, so bring more water per person than you anticipate to chilly nights. Always choose need, and high-energy snacks to fuel your adventures.

Safety should always be a top priority. Check the weather forecast before heading out.

Remember that desert conditions can change rapidly, and it's important to be prepared for anything, from sudden sandstorms to unexpected cold snaps. Rain can also turn desert wadis into flooded torrents, so choose camp sites on higher ground.

Always travel with at least two vehicles, and make sure someone back home knows the trip plan and expected return time. In case of an emergency, it's important to have adequate communication methods, and a reliable directions system. This means a fully charged phone isn't enough – the desert often has limited signal. A GPS device or map and compass are

When camping in the desert, building and maintaining a safe campfire is crucial, especially for cooking and warmth during a designated fire pit or create a cleared area far from any flammable materials, like dry brush or tents, to prevent accidental spread. Use only dead wood or bring your own

firewood, as many desert ecosystems rely on the scarce vegetation to sustain local wildlife. Keep a bucket of water or sand or a shovel nearby to quickly extinguish the flames if needed, and never leave the fire unattended.

For cooking, a portable camping stove can be a safer and more efficient option, reducing your impact on the environment while still allowing you to prepare meals. If you do use the campfire for cooking, make sure all food waste is disposed of properly to avoid attracting wildlife.

Before you leave the campsite, ensure the fire is completely out - douse it with water, stir the ashes, and feel with your hand to confirm there's no residual heat. Practicing safe fire habits helps preserve the desert environment and ensures an enjoyable, incident-free experience for all campers.

Desert camping isn't just about surviving; it's about thriving in a unique environment. It's a chance to be challenged, experience the beauty of the wilderness, and create memories to last a lifetime.

flooded torrents, so choose camp sites on higher ground Mai AlMuhaiteeb and Feras, Faisal, Huda, and Ahmed Al Rushaid

Rain can turn desert wadis into



There is no place like the gym to improve physical health, build strength, and enhance overall fitness. Ensuring safety while working out is crucial for preventing injuries and maximizing the benefits of an exercise routine. Nassim Alahyane, an Aramco authorized fitness instructor from Delta Fitness, shared key points to minimize risks and achieve personal goals.

Fitness level

Before starting a new workout routine, know your personal strengths, your weaknesses, and any pre-existing conditions. "We conduct the Physical Activity Readiness Questionnaire (PAR-Q), designed to determine an individual's safety when starting a new exercise plan," Alahyane says. "Most people can start an exercise plan instantly; however, some people may require a preliminary health check to ensure that they are taking on the right level of activity."

Alahyane also recommends avoiding overtraining or burnout. This can be done by using an exercise program, tracking performance, conducting regular fitness assessments, and taking regular recovery days.

Keep in mind that unrealistic goals can lead to overexertion and injuries. For example, runners should start with short, manageable distances and gradually increase the distance or speed. Gradual progression is the key to avoiding injuries.

Warm up and cool down

The safest way to train is to bring the body's temperature up slowly and loosen up the muscles before doing anything strenuous. A workout going from zero to 100 is likely to end in injury and may even be counterproductive.

Properly warming up before exercise and cooling down afterward is essential to prevent injuries. Warming up can include light cardio activities, such as jogging or jumping jacks, for five to 10 minutes to increase blood flow and prepare the muscles for exercise. Warm-ups and cool-downs should also include less-intensive versions of the workout activity.

Incorporate dynamic stretches before the workout to improve flexibility and reduce the risk of muscle strains. Cool down after your workout, spending five to 10 minutes performing reduced activities and gentle stretches to help muscles recover and prevent stiffness.

Form and equipment use

Starting an unfamiliar exercise can be tricky, with the most common causes of injuries in the gym being improper form and overuse.

"The most common gym-related injuries I have encountered as a fitness trainer include lower back

strains from improper lifting, shoulder injuries due to poor form in overhead movements, and knee issues from poor alignment during squats or lunges," says Alahyane. "Wrist strains and elbow injuries like tennis elbow often result from improper grip or overuse in weightlifting, while ankle sprains can occur from inadequate footwear or sudden direction changes."

To combat this, Alahyane advises asking for guidance from the fitness staff, especially when starting out, and using mirrors for real-time feedback.

He adds: "Starting with lighter weights helps build proper muscle memory, while watching instructional videos can enhance understanding of each exercise. Focusing on controlled, mindful movements, warming up properly, and listening to the body are also key practices for maintaining correct form and preventing injuries."

Ensure that the equipment is correctly adjusted before using it. For example, when using weight machines, adjust the seat, weights, and other settings to be in proper alignment with your body and capabilities to ensure that you are working out in a safe and efficient manner. Avoid the temptation to use weights that are too heavy, which can compromise form and lead to injuries. Finally, wipe down machines and weights after use to maintain hygiene and safety for everyone.

Hydration and nutrition

Drinking water during exercise plays a major role in optimizing athletic performance. Drink enough water before, during, and after a workout to stay hydrated.

Alahyane advises gym goers to focus on both preand post-workout nutrition. "Two to three hours prior to working out, consume a balanced meal with complex carbohydrates and lean protein. Have a light snack like a banana 30-60 minutes before working out, especially if it's been more than three hours since your last meal and a quick energy boost is needed. After exercising, prioritize a meal with protein and carbohydrates within 30-60 minutes to aid muscle recovery and replenish energy stores."

Enjoy a productive and injury-free workout experience in the gym by having a clear understanding of the exercises, personal goals, and current ability level, and having a realistic timeline for success.

Revealing cosmetics

Cosmetics are an important part of many people's daily routine, helping to enhance appearance and boost confidence. To ensure these products are beneficial and avoid waste, it's crucial to use the right products in the right way.



Know the product

Women apply an average of 12 personal care products containing 168 ingredients each day, and men use an average of six products with approximately 85 unique ingredients daily. Always read the ingredient list before purchasing or using any cosmetic product. Look out for potential allergens and irritants, such as fragrances, parabens, and sulfates. For sensitive skin, choose hypoallergenic products. Buy authentic, high quality products. Low quality and counterfeit makeup can contain undisclosed harmful ingredients such as lead or mercury. These products may be cheaper, but they compromise on quality and health as both lead and mercury are toxins that can be absorbed through the skin. They may also fail to be as effective at providing smooth, long-lasting coverage. Cosmetic products do have a shelf life. Using them past their expiry date can lead to infections and skin issues, especially makeup designed for use around the eyes. Regularly check the expiry dates on products and dispose of any that are beyond their expiry.



Keep it clear

Always wash hands and skin before applying cosmetics to avoid transferring bacteria to the skin or transferring it from one area to another. Clean makeup brushes and sponges with a suitable cleanser regularly, ideally once a week, to prevent the buildup of bacteria and makeup residues. Dispose of brushes and sponges that become broken, lose hairs, or appear dirty after cleaning. When it comes to cosmetics, sharing is not caring. Sharing cosmetics can spread bacteria and viruses, leading to infections such as conjunctivitis. If makeup must be shared, use disposable applicators like cotton swabs and never "double dip." Use a spray makeup sanitizer on solid products like eye shadow and blush. Always remove makeup before going to bed to allow the skin to breathe and regenerate overnight. Sleeping with makeup on can clog pores, leading to acne and other skin problems.



Skin types

Understanding different skin types is the first step toward safe cosmetic use. Oily, dry, combination, or sensitive skin each require products formulated for the specific skin type to help prevent acne or skin irritation, and stay looking its best all day.

Before applying a new product, perform a patch test. Apply a small amount to a discreet area of skin, like behind the ear or on the wrist, and wait 24 to 48 hours to see if any irritation occurs.

If there is any adverse reaction, such as redness, itching, or swelling, discontinue use immediately and consult a dermatologist. The skin's health should always be the priority.



Store properly

Store cosmetics in a cool, dry place, away from direct sunlight and humidity. Make sure the containers stay clean and always keep them tightly sealed when not in use to prevent dirt and bacteria from getting into them. Improper storage can also alter the product's composition, reducing its effectiveness and safety.

Enjoying the benefits of cosmetics while minimizing the risks associated with their use is possible. Remember, safe cosmetic practices are essential for maintaining healthy and beautiful skin.



14 15

Stars of safety



Wu Lien-teh

Dr. Wu Lien-teh was a Chinese-Malay physician credited with inventing the Wu mask, a precursor to the modern N95 mask. In 1910, during the deadly Manchurian plague outbreak, Dr. Wu was put in charge of combating the disease, where he laid the foundations for infectious disease protocols. Through his autopsies, he discovered that the plague was transmitted through the air rather than by vermin, as previously thought. He immediately called for preventive measures such as quarantining, disinfection, and cremation of bodies that couldn't be buried. Dr. Wu also began designing multi-layered gauze masks that effectively filtered out airborne pathogens, providing two-way protection unlike the single-layer masks used at the time. His pioneering work helped put an end to the outbreak and prevented the spread of future outbreaks, earning him a nomination for the Nobel Prize.



Vitale Bramani

Vitale Bramani was an Italian mountaineer who transformed the footwear industry with his invention of the rubber lug soles. In 1935, while Bramani was leading an expedition into the Italian Alps, a snow storm took the lives of six of his fellow climbers. One factor contributing to their deaths was the climbers' hobnail footwear not providing enough protection against the elements. Determined to develop a solution that would prevent such tragedies in the future, Bramani used vulcanized rubber to create weather-resistant, durable shoe soles and patented his design under the brand name Vibram. His rubber lug soles featured a distinctive tread pattern that greatly improved grip and stability, especially in rugged terrains. Today, Vibram soles are a standard in outdoor footwear, reflecting Bramani's lasting impact on the industry.

Tech for today



Airless and tireless

Airless tires, also known as non-pneumatic tires, have gained significant traction in various applications, especially in slower vehicles like bicycles, golf carts, lawn mowers, and heavy equipment. These tires are designed to be puncture-proof, enhancing safety and longevity by eliminating the risk of flats and blowouts. This makes the tires particularly well-suited for rough terrain and worksites with jagged debris and a significantly greener, more cost-effective option than conventional tires.

Airless tires can be seen in use today in bike sharing systems and in Michelin's Tweel for slower vehicles, which combines the tire and wheel into one unit. There are plans to make airless tires available for passenger vehicles, with Michelin and General Motors recently unveiling prototypes of their Unique Puncture-Proof Tire System (UPTIS).

Smoke savvy

Smart smoke detectors offer more features and greater reliability compared to traditional smoke alarms. They are equipped with advanced sensors that can detect smoke, heat, and carbon monoxide, providing a comprehensive safety solution. These devices can send real-time alerts to a mobile app, allowing users to alert emergency services. They can also notify any designated backup contact.

In addition to basic detection, many smart smoke detectors have self-monitoring and testing features, such as battery status notifications, and they offer integration with other smart home systems. For example, they can work with smart lighting to illuminate escape routes or with smart thermostats to shut down AC systems, preventing the spread of smoke. Some models also feature voice alerts that specify the type and location of the danger, making it easier for occupants to respond appropriately.



16 1

Don't let tech be a pain in the neck



It's hard to stay away from a computer screen these days. From laptops to mobile phones and smart watches, so much work and home time revolves around screens. Along with the many benefits modern technology brings, it does have drawbacks, and "tech neck" is one of them. This is the term used for neck or shoulder pain caused by poor posture resulting from bending the head downward to look at an electronic device for too long. The good news is, there are simple changes everyone can make to prevent tech neck.

Research by the Department of Anatomy at Athens University in 2020 concluded that tech neck – also called "text neck syndrome" is "a public health problem that has increased remarkably." Studies indicated that 73% of university students and 64.7% of people who work from home have neck or back pain. 39.2% of them admit to being less productive due to neck or lower back pain.

The typical adult head weighs around 5 kg (12 lbs), but bending it forward at a 45° angle means the force exerted on your neck increases to nearly 22 kg (50 lbs). It should be no surprise that this extra weight will lead to inflammation, pain, and muscle tightness in the neck – AKA tech neck – from the high pressure placed on the spine and the facet joints, which are instrumental in helping to bend and move the neck freely.

Combat tech necl

Reading screens is an almost unavoidable part of life now. Even menus in restaurants have mostly moved to using QR codes for mobile phones. It is not always possible to simply spend less time on the screen.

Apps such as Hunched, Neck Saver, and No Down alert the user to when they are tilting their head and neck forward to view their phone. They can detect when the user is not standing or sitting straight, and also provide hints on neck and back exercises to do while on the go.

Phone and device timers provide effective reminders to take regular screen breaks. These were initially to encourage people to take a break from work or study, but so much social interaction takes place online that it is helpful to take a break from the online crowd, too.

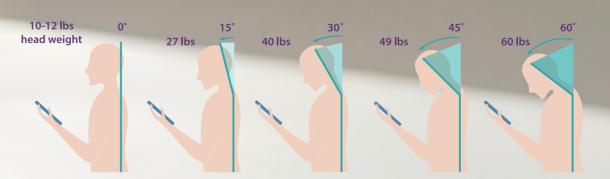
Voice-to-text is one way to reduce the amount of time spent looking downward while texting.

Neck exercises are fabulous for easing strain and can be done anywhere. Standing up to do some back stretches can loosen tight muscles. Focus on the neck with gentle head rotations and stretches - slowly tipping the head forward and back, then side to side – all of which can really make a difference. Using heated neck pads, taking a warm bath with Epsom salts, or splashing out to have a massage will also help if neck, shoulder, or back pain have already begun.

There is much that can be done to prevent tech neck, and by combining the latest technology with traditional stretches and common-sense actions, everyone can remain flexible and strain free

Symptoms of tech neck

- Dull ache (leading to sharper pain) in the back of the neck.
- Stiffness/tightness in shoulders and neck.
- Decreased range of motion for head and neck.
- Intermittent or constant headaches.
- Neck, shoulder, and spine misalignment and position.



سودوکو Sudoku

6

9

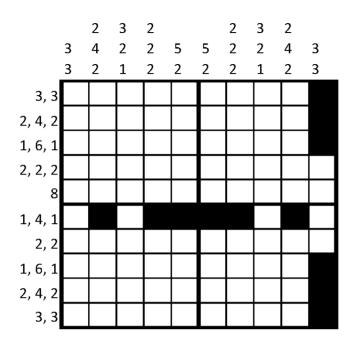
ارسل اسمك وموقعك ومعلومات التواصل وصورة لك

9

8

4

نونوغرام (10x10) Nonogram (10x10)



الحل: Answer:



How to solve a nonogram puzzle:

- 1. Use the clues: The numbers on the top and side indicate how many squares are filled in each row or column. Multiple numbers mean separate groups of filled squares, e.g., "3, 2" means a group of three filled squares, a gap of one square or more, then a group of two filled squares.
- 2. Fill and mark: Fill squares based on the clues and mark emptu ones with "X". Look for rows or columns where the total number of filled squares match the grid size, e.g., a "4, 5" row in a 10x10 puzzle means the only possible solution is a group of four filled squares, a one-square gap, then a group of five filled squares.
- 3. Look for large numbers: Find guaranteed squares in rows or columns with large numbers by calculating overlaps. E.g., a "7" column in a 10x10 puzzle must have the four middle squares filled in, no matter where the group starts.
- 4. Check both directions: Alternate between rows and columns to find more squares. Use a filled in column or row to solve intersecting columns or rows, e.g., a "10" column in a 10x10 puzzle will solve all "1" rows.
- 5. Finish the picture: Keep solving until the hidden image is revealed.

One row and one column are prefilled to get you started!

كيفية حل نونوغرام:

- اقرأ الدلائل: تشير الأرقام الموجودة في الأعلى والجانب إلى عدد المربعات المملوءة في كل صف أو عمودً. تعني الأرقام المتعدَّدة مجموعات منفصلة من المربعات الملوءة، على سبيل المثال، "3, 2" تعني ثلاثة مربعات مملوءة، ثم مربع أو أكثر فارغ، ثم مربعين
- امالً وضع علامة: املأ المربعات بناءً على الدلائل وعلَّم المربعات الفارغــة بعلامة "X". ابحث عن الصفوف أو الأعمدة حيث يتطابق العدد الإجمالي للمربعات الملوءة مع حجم الشبكة، على سبيل المشال، يعني الصف "4, 5" في أحجية بحجم 10x10 أن الحل الوحيد المكن هو أربعة مربعات مملوءة، ثم مربع واحد فارغ، ثم خمسة
- ابحـــث عن الأرقام الكبيرة: ابحث عن المربعات المضمونة في الصفوف أو الأعمدة ذات الأرقام الكبيرة عن طريق حساب المربعات التي لا يمكن تجنبها. على سبيل المثال، في أحجية بحجم 10x10، أي عمود به "7" يضمن أن المربعات الأربعة الوسطى مملوءة، بغض النظر عن مكان بدء المجموعة.
- 4. تحقق من كلا الاتجاهين: قم بالتبديل بالحل بين الصفوف والأعمدة لحل المزيد من المربعات. استخدم عمودًا أو صفًا مملوءًا لحل الأعمدة أو الصفوف المتقاطعة، على سبيل المثال، سيحل عمود بــه "10" أي صف به "1" في أحجية بحجم 10x10.
- 5. أكمل الصورة: استمر في الحل حتى يتم الكشف عن الصورة المخفية.

تم حل صف وعمود واحد لمساعدتك في حل البقية!

8 6

9

6

6

الحل: Answer:

T	7	9	S	Z	3	6	ħ	8
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9	τ	Þ	6	3	S			L
8	3	7	Z	9	ħ	S	6	τ
Z	ς	6	τ	8	7	3	9	ħ

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