أرامكو السعودية
saudi aramco

CDPNE

English & Math Test Sample

عينة لاختبارات اللغة الإنجليزية والرياضيات

عزيزي المتقدم – عزيزتي المتقدمة

يسر إدارة التدريب والتطوير في شركة أرامكو السعودية أن تقدم لكم هذه المعلومات الإرشادية وأنتم تستعدون لأداء اختبارات القبول لبرنامج التدريب الجامعي لغير الموظفين (CDPNE).

تتألف اختبارات القبول لهذا البرنامج من:

1- اختبار تحديد المستوى في اللغة الإنجليزية

2- اختبار تحديد المستوى في الرياضيات

وتعطى جميعها للمتقدمين في يوم واحد.

ولا يعني النجاح في الاختبارات ضمان القبول في البرنامج، حيث أن القبول النهائي في البرنامج يعتمد على:

1- العدد المطلوب من قبل أرامكو السعودية

2- عدد المتقدمين والمتقدمات الذين اجتازوا الاختبارات بنجاح

وسوف يتم اختيار العدد المطلوب من الناجحين والناجحات بناءً على أفضل أداء في العوامل الآتية:

1- معدل المواد الكلي ومعدل المواد العلمية في الشهادة الثانوية

2- درجة اختبار القدرات العامة لطلاب وطالبات المرحلة الثانوية (قياس) أو ما يعادله لخريجي وخريجات المدارس الأجنبية

3- مستوى المتقدم أو المتقدمة في اختبارات تحديد المستوى

يجب الحضور إلى مكان الاختبار في اليوم والوقت المحددين لك ويجب إحضار ما يلي:

1- بطاقة الأحوال المدنية أو جواز السفر

2- الدعوة لدخول الاختبار التي حصلت عليها عن طريق موقع الشركة بعد قبول طلبك

لن يكون بمقدور المسئولين عن الاختبار إبلاغك بأي نتيجة. وللمعلومية فإن النتائج وأي معلومات إضافية سترسل لك عن طريق مكتب التوظيف.

تعليمات وإرشادات

اختبار تحديد المستوى في اللغة الإنجليزية

يهدف هذا الاختبار إلى تحديد مستواك في اللغة الإنجليزية طبقاً للمستويات المعمول بها في شركة أرامكو السعودية.

يتألف هذا الاختبار من (60) سؤالاً لكل سؤال أربعة اختيارات. سيتم تقييمك بإعطائك درجات على الأسئلة التي أجبت عنها إجابة صحيحة فقط.

في الصفحات التالية، تجدون عينة لبعض الأسئلة النموذجية التي تساعدك على الاستعداد لهذا الاختبار.

يمكنكم حل هذه الأسئلة ثم مقارنة إجاباتكم بالإجابات الصحيحة الموجودة في نهاية هذا الكتيب.

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ENGLISH SAMPLE QUESTIONS

CONTENTS

[Please Note: These questions are for practice purposes only]

GRAMMAR

DIRECTIONS: **Read each sentence.**
Choose the correct answer.

1. You can borrow my car tonight, _____ you promise to drive carefully.

A. even
B. provided
C. however
D. except

2. Faisal _____ to Dubai on a business trip next week.

A. is going
B. has gone
C. has been going
D. to go

3. You should never send text messages _____.

A. during driving
B. you are driving
C. while driving
D. as driving

VOCABULARY

DIRECTIONS: **Read each sentence.**
Choose the correct answer.

4. Covering an area of more than 165,000,000 square kilometers, the Pacific Ocean is truly _____.

A. civilized
B. diagonal
C. immense
D. virtuous

5. Maher is known for being a very _____ person, and he has many friends and contacts as a result.

A. emphatic
B. eventful
C. spacious
D. sociable

6. Layla was very nervous on her first day at school, so her mother did her best to _____ her.

A. reassure
B. pressure
C. devalue
D. sanction

VOCABULARY IN CONTEXT

DIRECTIONS: **Read each question.**
Choose the correct answer.

7. Mohammed, in the Program Design Department, had to **liaise** with Sultan, in the IT Support Department, in order to complete the project successfully.

liaise is closest in meaning to:

A. connect with someone to exchange work-related information
B. travel with someone to make the journey time pass quickly
C. practice with someone to improve your skill at a sport or game
D. argue with someone to make sure you get your point across

8. At the end of Khaled's business presentation, his boss asked him to **recap** briefly for the benefit of those that had arrived late.

recap is closest in meaning to:

A. reject any form of criticism that people try to level at you
B. repeat the main points of something that has just been said
C. refer all questions to someone who is more senior than you
D. remember to offer your guests some tea, coffee, or water

9. Being an experienced taxi driver, Muneer knows all of the back-street routes that allow him to **bypass** the city's busiest and most congested areas.

bypass is closest in meaning to:

A. fail due to lack of effort
B. avoid by going around
C. forget to back things up
D. claim some money back

READING COMPREHENSION

DIRECTIONS: **Read the passages.**
Read each question.
Choose the correct answer.

READING PASSAGE 1

1. As football is to the people of Brazil, so is rugby to the people of New Zealand — that is to say, it is a national obsession. Rugby is a tough, highly physical contact sport contested by two teams of 15 players. Although, like football, the game of rugby originated in 19th-Century England, the New Zealand national team, known around the world as the "All Blacks," have raised the skill-level of the game to new heights and, like their footballing counterparts in Brazil, have set the standard for other teams to follow. The All Blacks take their name from their distinctive all-black playing uniform, or "kit," which they have been wearing ever since they made their first tour of Europe in 1905. The team's emblem, or badge, is a silver fern — a feather-like plant that is the symbol of New Zealand. The All Blacks are the most famous, recognizable, and successful team in world rugby, and the "All Blacks" name is a highly marketable global brand that represents an attractive proposition for corporate sponsors. The German sportswear company Adidas has been the All Blacks' official kit supplier since 1999. The All Blacks' current nine-year deal with Adidas is worth $200 million, and was negotiated on the basis that the All Blacks would be expected to win around 75% of their matches. In recent years, and somewhat controversially, the All Blacks have allowed the name of the U.S. financial services group AIG to appear on the front of the famous black jersey. Although no official figures have been released, this deal is thought to have been worth in the region of $80 million over five years.

2. The major rugby-playing nations of the world are split roughly 50/50 between those located in the Northern Hemisphere and those located in the Southern Hemisphere, and the international rugby calendar is accordingly organized around this geographical division. The All Blacks contest — and frequently win — an annual competition with their three fellow Southern Hemisphere rugby powers: South Africa, Australia, and Argentina. A Rugby World Cup has been held every four years since the **inaugural** tournament in 1987, which was hosted and won by the All Blacks. In addition to their 1987 triumph, the All Blacks won the Rugby World Cup in 2011 and again in 2015. The All Blacks additionally play host to high-profile and eagerly awaited tours by the combined British and Irish "Lions" team once a decade or so. A tour to New Zealand is considered the ultimate test in world rugby, and only once, in 1971, have the Lions been victorious on All Black home soil. The All Blacks have won an incredible 77% of their 600-plus international "test" matches and have scored more points than any other rugby-playing nation. They are the only international team to have a winning record against every single country they have played, and, since their international debut in 1903, when the All Blacks defeated regional rivals Australia by a score of 22—3, only seven nations have managed to beat them. Since the introduction of the World Rugby Rankings in 2003, the All Blacks have held the number one ranking for longer than all the other national teams combined.

3. The Maori are the descendants of the Polynesian seafarers of the South Pacific, and are the original inhabitants of the islands now known as New Zealand. The Maori arrived in New Zealand around a thousand years before the first Europeans and called their new home

"Aotearoa," meaning "Land of the long white cloud." Although thoroughly westernized after more than two centuries of British migration and influence, modern-day New Zealand is suffused with elements of traditional Maori culture, and New Zealand rugby is no exception. The All Blacks make a point of celebrating Maori culture by performing the ceremonial *haka* before each international match. Often mistakenly referred to as a "war dance," the *haka* is actually more of a ceremonial "challenge" to the opposition. Although there are several different *hakas* in the All Blacks' repertoire, the most famous version is known as *Ka Mate*, and was composed in the 19th Century by the Maori leader Te Rauparaha. Since 2005, a new *haka* called *Kapa o Pango* has increasingly been used as an alternative to *Ka Mate*. The All Blacks — a team that has included many famous players of Maori origin — have come to regard the performance of the *haka* as an indispensable part of their identity as rugby-playing New Zealanders. Highly dramatic and entertaining for the watching spectators, many people believe that the *haka* gives the All Blacks an important psychological edge over their opponents. For this reason, opposing teams are now refusing to be intimidated, and will confront the *haka* with a steely intent.

4. Like South Africa, Argentina, and Australia, New Zealand does not have an official national stadium for international matches. Instead, most All Blacks matches are hosted at stadiums located in the country's three major cities: Auckland, New Zealand's largest city, and Wellington, New Zealand's capital city, on New Zealand's North Island, and Christchurch, on New Zealand's South Island. The attractive university town of Dunedin, also on South Island, serves as an auxiliary venue for test match series that comprise more than three test matches. The Eden Park stadium in Auckland has hosted many more matches than any other rugby venue in New Zealand, and traditionally plays host to the final test match in a series. Over the years, Eden Park has gained a reputation as a home "fortress" for the All Blacks, where visiting teams very rarely taste victory. Eden Park was the natural choice for the 1987 and 2011 Rugby World Cup finals, both of which the All Blacks won by defeating France. Indeed, records show that since the All Blacks played their first international test match at Eden Park, against South Africa in 1921, they have won an astonishing 84% of the 80-plus matches they have played there. It is an interesting question whether the All Blacks have been so successful in part because they traditionally play the final game of a home test match series at their "fortress" of Eden Park, or whether their win percentage at Eden Park is so impressive because the All Blacks are absolutely determined to win the final, often decisive match of a test series.

5. A winning season for the All Blacks generates a frenzy of national media interest and guarantees "A-list" celebrity status for the team's top players, such as former star Daniel Carter, the world's record points-scorer, and legendary captain Richie McCaw, who led his team to two successive Rugby World Cup triumphs. All Black defeats, by contrast, especially in a high-profile test match series against a major rival such as the Lions, South Africa, or Australia, or in a major tournament such as the Rugby World Cup, are occasions for national mourning and lengthy public inquests over what went wrong. A recent example of this occurred after the All Blacks were surprisingly crushed by England in the semi-final of the 2019 Rugby World Cup, with the *NZ Herald* newspaper announcing "The end of the world!" The *Herald on Sunday,* for its part, simply presented a front page that was entirely blacked out.

   Indeed, the atmosphere in New Zealand following their 2019 Rugby World Cup semi-final exit recalled the reaction in Brazil when the home team suffered a humiliating 7—1 semi-final defeat at the hands of Germany in the 2014 Soccer World Cup. But, despite this setback, if there is one thing that the rugby world can count on, it is that the All Blacks will soon return to winning

ways. After all, the best-known maxim in New Zealand rugby is "Never change a winning team and always change a losing one." At the end of the day, it is their winning mentality that accounts for the All Blacks' remarkable record of success and sets them apart from other teams.

10. According to paragraph 3, _____.

A. European settlers called New Zealand "Land of the long white cloud"
B. Polynesian seafarers of the South Pacific are thoroughly westernized
C. *Kapa o Pango* was composed by the great Maori leader Te Rauparaha
D. the *haka* has considerable significance for the New Zealand All Blacks

11. From reading paragraph 2, which **one** of these statements is **probably true**?

A. Japan is one of the seven nations that have beaten the All Blacks.
B. Australia and South Africa co-hosted the 2007 Rugby World Cup.
C. The All Blacks didn't win the 1995 or the 1999 Rugby World Cup.
D. Fiji have won 95% of the international matches they have played.

12. Why does the writer draw a parallel with football in Brazil in lines 1 and 2 of paragraph 1?

A. to make the point that New Zealand, like Brazil, is in the Southern Hemisphere
B. to highlight the difference in the number of players in rugby and football teams
C. to convey the degree of passion that New Zealanders have for the sport of rugby
D. to underline the fact that both sports had their origins in 19th-Century England

13. Paragraph 4 supports which **one** of the following statements?

A. Eden Park stadium can now accommodate 44,000 spectators.
B. South Africa were the winners of the 2019 Rugby World Cup.
C. Argentina is now recognized as a major force in world rugby.
D. The population of Christchurch is less than that of Auckland.

14. Why are opposing teams increasingly choosing to confront the *haka*?

A. because they do not want the All Blacks to gain a psychological advantage
B. because they much prefer the traditional *Ka Mate* version to *Kapa o Pango*
C. because they are 100% committed to entertaining the watching spectators
D. because they are not allowed to perform their own ceremonial "challenge"

15. In paragraph 2, **inaugural** means _____.

A. short
B. minor
C. first
D. local

16. Paragraph 5 is mainly about _____.

A. the All Backs' defeat by England in the semi-final of the 2019 Rugby World Cup
B. the reaction of New Zealanders and the New Zealand media to All Black results
C. the widely differing formats of the *NZ Herald* and *Herald on Sunday* newspapers
D. the possible reasons for Brazil's humiliating 7—1 semi-final defeat by Germany

17. In the last line of paragraph 1, "in the region of" is another way of saying _____.

A. alphabetically
B. statistically
C. substantially
D. approximately

READING PASSAGE 2

1. The year 1815 CE has become synonymous with one of history's most celebrated battles, Waterloo, at which the reign of France's Emperor Napoleon was brought to an end by a combined British and Allied army led by the Duke of Wellington. Perhaps it is this association in popular imagination that has served to airbrush out another tumultuous event that occurred in that same year, half a world away, in Indonesia. As we shall discover, that event, a volcanic eruption, was to have consequences for the future of humanity that were every bit as profound as those of Waterloo. Since 1982, the magnitude of volcanic eruptions has been measured on a scale known as the Volcanic Explosivity Index, commonly abbreviated to VEI. The VEI scale has values ranging between zero and a maximum of 8, and, between VEI-2 and VEI-8, is logarithmic rather than linear, meaning that a one-point increase on the scale represents a 10-fold increase in the amount of volcanic material ejected into the atmosphere. This means that a VEI-6 eruption is 10-times as great as a VEI-5 eruption; in turn, a VEI-7 eruption is 10-times as great as a VEI-6 eruption, and so on. As one might expect, frequency and magnitude are inversely correlated, and volcanic eruptions that are designated as VEI-8 — sometimes referred to as "supervolcanoes" — are extremely rare. Indeed, there have been no VEI-8 events in recent human history; the last volcanic event of this magnitude was the Oruanui eruption that formed Lake Taupo in New Zealand, around 26,500 years ago. The present geological era, known as the Holocene, has only **witnessed** a dozen or so volcanic events of magnitude VEI-7.

2. Asked to name history's most devastating volcanic eruption, chances are that most people would cite either the 79 CE eruption of Mount Vesuvius or the 1883 CE eruption of Mount Krakatoa. And most people would be well wide of the mark! Had the question instead concerned the most *famous* volcanic eruption, then Vesuvius, which completely destroyed the Roman cities of Pompeii and Herculaneum, and Krakatoa, the subject of a 1968 Hollywood disaster movie and said to be the loudest sound in recorded human history, would both be perfectly reasonable answers. It is curious, though, and somewhat ironic, that the most devastating volcanic eruptions to have occurred in recorded human history seem to have made little impression on our collective memory, their names relegated to the obscure realms of quiz trivia. The 1883 CE eruption of Krakatoa is designated as a Level-6 eruption on the VEI scale, while the 79 CE eruption of Vesuvius is designated as a VEI-5 event. And yet, as devastating as these two volcanic eruptions were, they pale in comparison to history's VEI-7 eruptions.

Comprising 17,508 islands, many of which, like Bali, are of outstanding natural beauty, Indonesia lies — ironically — at the juncture of our planet's two most seismically active regions: the lesser-known Alpide Belt, which extends from southeast Asia through the mountain ranges of the Himalayas, Turkey, southern Europe and northwest Africa to the Atlantic, and the "Ring of Fire," the notorious collection of independent tectonic subduction zones encircling the Pacific. Thus, Indonesia can fairly be said to have been at once blessed and cursed by nature.

3. Prior to the catastrophic events of 1815, the dormant volcanic cone of Mount Tambora, having a diameter of 60 kilometers at its base, rose to a height of over 4,300 meters, making it one of the tallest peaks in the Indonesian archipelago. Radiocarbon dating has established that Tambora had erupted three times during the present geological era, that is, during the 11,000-year period since the end of the last Ice Age, before its 1815 eruption, which is believed to be both the largest in recorded human history and the largest of the Holocene era to date. The first warning signs that the dormant volcano was about to awaken appeared three years earlier, in 1812, when Tambora began to emit ominous noises and dark clouds of ash. On April 5th, 1815, the thunderous explosions from a moderate-sized eruption were heard in Batavia (modern-day Jakarta), and, on April 6th, thick volcanic ash descended on eastern Java. The eruptions intensified dramatically on the evening of April 10th, and Tambora became a flowing mass of liquid fire. An estimated 100 cubic kilometers of pyroclastic material was ejected skywards, and pyroclastic flows cascaded down the mountainside in all directions, annihilating everything in their path. Twelve thousand people, the inhabitants of nearby villages, met their deaths instantly. Tambora's summit was utterly blown away, leaving a volcanic caldera seven kilometers in diameter and 700 meters deep. The skies went dark for several days, and, over 2,000 kilometers away on Java, Sir Stamford Raffles, the British founder of Singapore, reported hearing what he thought was heavy gunfire.

4. Fine particles of volcanic ash, ejected high into the stratosphere, were carried by longitudinal winds around the globe, producing brilliantly colored sunsets of red, green, orange, pink, and purple to be captured by artists such as Turner. But spectacular skies above London were one of Tambora's few benign legacies. Once it was realized that the "gunfire" was, in fact, the distant echo of a major volcanic eruption, Raffles sent his lieutenants to investigate, and their reports provide a sober documentation of the devastation and human misery that they encountered. The aftermath of Tambora's 1815 eruption saw the death toll climb inexorably. While estimates of total fatalities vary somewhat, it would appear that as many as 100,000 people may have perished on the islands of Sumbawa and Lombok. Most were victims either of starvation, as food sources were wiped out, or of intestinal diseases, such as dysentery, caused by drinking polluted water. Volcanic eruptions of VEI-5 and above always impact weather patterns, and invariably produce a significant global cooling effect due to the vast quantities of sulfur that are ejected. After Tambora had spewed 100-million tons of sulfur into the Earth's upper atmosphere, the Northern Hemisphere waited in vain for the spring of 1816 to arrive. It never did. Instead, 1816 became known as "the year without a summer" as snow fell in July and rivers froze in August. Millions died of starvation as staple food crops failed repeatedly, causing widespread famine from Europe to China. A typhus epidemic ravaged the Mediterranean, while, in India, up to a million died from an outbreak of cholera.

5. As devastating as Tambora's 1815 eruption was, its legacy extended well beyond its immediate aftermath. Indeed, this single catastrophic event had consequences so far-reaching that it shaped the course of world history. The freezing of eastern America led to the westward migration of millions of settlers. New territories were opened up and political attitudes were reshaped as Midwestern states such as Illinois were incorporated into the Union. In Europe, famine and the mass unemployment that followed demobilization at the end of the Napoleonic Wars caused widespread unrest, forcing social reform. The virulent outbreaks of cholera that were common in the decades following Tambora, and which killed tens of millions of people resulted in much-needed improvements in sanitation and healthcare advances that have since saved the lives of countless millions. In China, the big freeze caused by Tambora devastated the rice harvest for several years in succession. In desperation, the farmers of Yunnan Province turned their backs on subsistence crops in favor of cash crops such as the drug opium. China soon became the center of a worldwide trade in opium that, while enriching a few, resulted in conflict, misery, and death on a truly industrial scale. Military historians have long been aware that heavy rain and muddy conditions were major factors in Napoleon's defeat at Waterloo in June 1815. In a final irony, new research indicates that the unseasonal summer rainfall in Europe was caused by a pulse of cloud formation as electrified volcanic ash from Tambora short-circuited the electrical current of the ionosphere.

18. The rice harvest in China was devastated because _____.

A. of freezing temperatures
B. of an outbreak of cholera
C. farmers were desperate
D. settlers moved westward

19. According to paragraph 4, _____.

A. Raffles sent his lieutenants to capture the sunsets in London
B. major volcanic eruptions always impact weather patterns
C. as many as 100,000 people may have died on Java and Bali
D. the year 1815 is known as "the year without a summer"

20. In paragraph 3, "to date" is another way of saying _____.

A. by then
B. long ago
C. this time
D. so far

21. In paragraph 1, **witnessed** means _____.

A. seen
B. sold
C. taken
D. timed

22. Look at the four numbers, **(1)**, **(2)**, **(3)**, and **(4)** that indicate where the following sentence could be added to paragraph 2.

Together, these two regions account for 98% of the world's major earthquakes.

"Asked to name history's most devastating volcanic eruption, chances are that most people would cite either the 79 CE eruption of Mount Vesuvius or the 1883 CE eruption of Mount Krakatoa. **(1)** And most people would be well wide of the mark! Had the question instead concerned the most *famous* volcanic eruption, then Vesuvius, which completely destroyed the Roman cities of Pompeii and Herculaneum, and Krakatoa, the subject of a 1968 Hollywood disaster movie and said to be the loudest sound in recorded human history, would both be perfectly reasonable answers. **(2)** It is curious, though, and somewhat ironic, that the most devastating volcanic eruptions to have occurred in recorded human history seem to have made little impression on our collective memory, their names relegated to the obscure realms of quiz trivia. The 1883 CE eruption of Krakatoa is designated as a Level-6 eruption on the VEI scale, while the 79 CE eruption of Vesuvius is designated as a VEI-5 event. And yet, as devastating as these two volcanic eruptions were, they pale in comparison to history's VEI-7 eruptions. **(3)** Comprising 17,508 islands, many of which, like Bali, are of outstanding natural beauty, Indonesia lies — ironically — at the juncture of our planet's two most seismically active regions: the lesser-known Alpide Belt, which extends from southeast Asia through the mountain ranges of the Himalayas, Turkey, southern Europe and northwest Africa to the Atlantic, and the "Ring of Fire," the notorious collection of independent tectonic subduction zones encircling the Pacific. **(4)** Thus, Indonesia can fairly be said to have been at once blessed and cursed by nature."

Choose the place where the sentence best fits.

A. (2)
B. (1)
C. (4)
D. (3)

23. From reading paragraph 4, which **<u>one</u>** of these statements is **<u>probably</u> <u>true</u>**?

A. Cholera is not considered a particularly serious disease.
B. Mount Tambora is located on the island of Sumbawa.
C. Northern Hemisphere rivers usually freeze in August.
D. The chemical element sulfur is a man-made substance.

24. Which of the four options A, B, C, and D below best summarizes the information contained in paragraph 5?

A. New research by Europe's leading military historians indicates that the Napoleonic Wars were the legacy of Tambora's devastating 1815 eruption.
B. Were it not for the unseasonal summer rainfall in Europe in June of 1815, Napoleon may well have emerged victorious at the battle of Waterloo.
C. It is ironic that the 19th-Century cholera outbreaks which killed millions of people should have led to improvements in sanitation and healthcare.
D. Beyond the immediate death and destruction it caused, Tambora's 1815 eruption would have a profound long-term influence on worldwide events.

- END OF ENGLISH PRACTICE TEST -

تعليمات وإرشادات

اختبار تحديد المستوى في الرياضيات

يهدف هذا الاختبار إلى قياس مستواك في الرياضيات طبقاً للمستويات المعمول بها في شركة أرامكو السعودية.

يتألف اختبار تحديد المستوى في الرياضيات من (60) سؤالاً. صممت هذه الأسئلة لتكون مشابهة لما درست في المرحلتين المتوسطة والثانوية ولا تحتاج إلى آلة حاسبة لحلها. وكما في اختبار اللغة الإنجليزية، فإن هذا الاختبار مصمم بطريقة اختيار الإجابة الصحيحة حيث يوجد لكل سؤال أربعة اختيارات. وسيتم تقييمك بإعطائك درجات على الأسئلة التي أجبت عنها إجابة صحيحة فقط.

يقدَّم هذا الاختبار باللغتين العربية والإنجليزية.

في الصفحات التالية، تجدون عينة لبعض الأسئلة النموذجية التي تساعدك على الاستعداد لهذا الاختبار.

يمكنكم حل هذه الأسئلة ثم مقارنة إجاباتكم بالإجابات الصحيحة الموجودة في نهاية هذا الكتيب.

برنامج التدريب الجامعي لغير الموظفين

CDPNE

عينة لأسئلة اختبار الرياضيات

MATH SAMPLE QUESTIONS

جميع الأرقام والرموز والتعابير والمعادلات والفترات الرياضية والنقاط البيانية المكتوبة باللغة الإنجليزية تقرأ من اليسار لليمين في هذا الاختبار.

تنبيه مهم: الأسئلة التالية هي مجرد أمثلة للمواضيع التي يغطيها اختبار تحديد المستوى في الرياضيات، وليس بالضرورة أن تغطي هذه الأمثلة جميع المواضيع. مواضيع قسم الرياضيات مبنية على محتوى مادة الرياضيات في مناهج وزارة التعليم السعودية للمرحلتين المتوسطة والثانوية.

IMPORTANT NOTICE: The following questions are just examples of topics covered in the Mathematics screening test, and these examples do not necessarily cover all of the topics that may appear in the actual Mathematics screening test. The Mathematics screening test topics are based on the Mathematics content in the curricula of the Saudi Ministry of Education for intermediate and high school levels.

These questions are for practice purposes only

هـذه الأسئلة هي لغـرض التدريب فقــط

Mathematics Practice Test

اختبار تدريبي في الرياضيات

1) The average age of 6 persons is 31 years and the average age of another group of 3 persons is 19 years. Find the average age of all 9 persons.	1) متوسط أعمار ستة أشخاص هو 31 سنة ومتوسط أعمار ثلاثة أشخاص آخرين هو 19 سنة. كم متوسط أعمار الطلاب التسعة مجتمعين؟

A	28	A
B	27	B
C	25	C
D	23	D

2) Find the 5^{th} term of a geometric sequence if its first term is 27 and its common ratio is $\frac{-1}{3}$.	2) ما هو الحد الخامس لمتتابعة (لمتتالية) هندسية حدها الأول 27 وأساسها $\frac{-1}{3}$؟

A	$\frac{1}{9}$	A
B	$-\frac{1}{9}$	B
C	$\frac{1}{3}$	C
D	$-\frac{1}{3}$	D

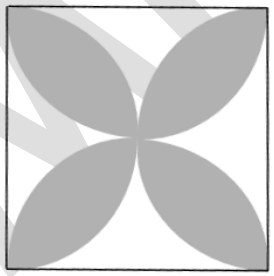
3) Find the value of b for which the diameter of the circle $x^2 + y^2 + 4x - 6y + b = 20$ has length 10.	3) ما هي قيمة b إذا كان طول قطر الدائرة $x^2 + y^2 + 4x - 6y + b = 20$ هو 10؟

A	5	A
B	8	B
C	–8	C
D	–5	D

4) The price of a commodity increases by 25% and then decreases by 20% of the increased price. What is the percentage difference between the final price and the original price?	4) ارتفعت قيمة بضاعة 25% ، ثم انخفضت 20% عن قيمتها بعد الارتفاع. ما حصيلة التغير في السعر النهائي عن السعر الأصلي؟

A	22.5%	A
B	5%	B
C	10%	C
D	0%	D

5) Four identical semi-circles are drawn inside a square so that the diameters of these semi-circles form the four sides of the square as shown in the figure below. If the sides of the square are 3 cm in length, what is the area of the shaded part of the figure in cm^2? (Note: the figure is not drawn to scale)	5) رُسِمَت أنصاف دوائر متماثلة داخل مربع بحيث تتطابق أقطار هذه الأنصاف من الدوائر مع أضلاع المربع كما هو موضح في الشكل أدناه. إذا كان طول ضلع المربع 3 cm، فما هي مساحة الجزء المظلل في الشكل بوحدة cm^2 ؟ (ملاحظة: الشكل المرسوم قد لا يتطابق مع مقياس الرسم)



A	$\frac{9(\pi-2)}{2}$	A
B	$\frac{9(\pi-1)}{2}$	B
C	$\frac{9(\pi+2)}{2}$	C
D	$\frac{9(\pi+1)}{2}$	D

6) $\log_{\frac{1}{2}}(1024) = ?$	$\log_{\frac{1}{2}}(1024) = ?$ (6

A	-8	A
B	10	B
C	-10	C
D	8	D

7) A bookshelf holds 8 history books, 5 math books, and 4 science books. Ahmed randomly selects one book, then puts it back on the shelf, and again selects one book at random. What is the probability that the two books selected are both history books?	7) يحتوي أحد الرفوف على 8 كتب تاريخ و5 كتب رياضيات و4 كتب علوم. اختار أحمد كتاباً واحداً بشكل عشوائي ثم أعاده للرف ثم اختار كتاباً واحداً بشكل عشوائي مرة أخرى. ما احتمال أن يكون كلا الكتابين المختارَين من كتب التاريخ؟

A	$\frac{15}{17}$	A
B	$\frac{56}{289}$	B
C	$\frac{16}{34}$	C
D	$\frac{64}{289}$	D

8) A circle with center point $(-4, 3)$ is shifted by C unit translation to the left and then reflection around the x-axis. What are the coordinates of the new center?	8) دائرة مركزها النقطة $(3, -4)$. أزيحت بانسحاب مقداره C وحدة نحو اليسار ثم انعكاس حول المحور السيني. ما هي إحداثيات المركز الجديد؟

A	$(-4 + C, 3)$	A
B	$(-4 - C, -3)$	B
C	$(4 + C, -3)$	C
D	$(-4, C - 3)$	D

9) What is the value of k that makes the following function continuous at $x=2$? $f(x)=\begin{cases} kx^2, & x\le 2 \\ 2x+k, & x>2 \end{cases}$	9) ما قيمة الثابت k التي تجعل من الدالة التالية دالة متصلة عند النقطة $x=2$ ؟ $f(x)=\begin{cases} kx^2, & x\le 2 \\ 2x+k, & x>2 \end{cases}$

A	$\frac{4}{3}$	A
B	$\frac{-1}{2}$	B
C	$\frac{1}{2}$	C
D	$\frac{-4}{3}$	D

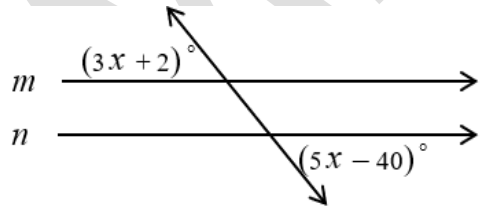
10) What is the solution set of the equation $\lvert x-12\rvert=4$?	10) ما مجموعة حل المعادلة $\lvert x-12\rvert=4$ ؟

A	$\{-3,3\}$	A
B	$\{-8,16\}$	B
C	$\{-16,8\}$	C
D	$\{8,16\}$	D

11) Simplify the expression $\frac{5x-5}{x^2-1}$ where $x \neq \pm 1$.	11) ما تبسيط العبارة الكسرية $\frac{5x-5}{x^2-1}$ عندما $x \neq \pm 1$؟

A	$5\left(\frac{1}{x}-1\right)$	A
B	$\frac{5}{x}$	B
C	$\frac{5}{x+1}$	C
D	$\frac{5}{x-1}$	D

12) In the figure below, m and n are parallel lines. What is the value x? (Note: the figure is not drawn to scale)	12) الخطان المستقيمان m و n في الشكل أدناه متوازيان. ما قيمة x ؟ (ملاحظة: الشكل المرسوم قد لا يتطابق مع مقياس الرسم)



A	21	A
B	19	B
C	10	C
D	16	D

13) Simplify i^{17}, such that $i=\sqrt{-1}$.	13) ما تبسيط i^{17}، حيث $i=\sqrt{-1}$؟

A	i	A
B	1	B
C	$-i$	C
D	-1	D

14) Solve the equation $8^x=\sqrt{2^{2x+8}}$.	14) ما حل المعادلة $8^x=\sqrt{2^{2x+8}}$؟

A	-8	A
B	2	B
C	8	C
D	-2	D

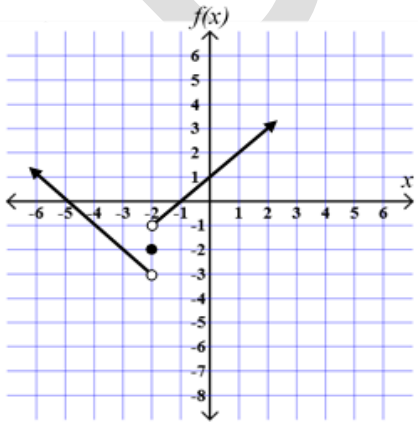
15) What is the fourth term in the expansion of $(x-3y)^6$?	15) ما الحد الرابع في مفكوك $(x-3y)^6$؟

A	$-180x^4y^2$	A
B	$540x^2y^4$	B
C	$180x^3y^3$	C
D	$-540x^3y^3$	D

16) What is the value of a if $\begin{bmatrix}2 & 2\\1 & 3\end{bmatrix}\cdot\begin{bmatrix}a\\b\end{bmatrix}=\begin{bmatrix}18\\17\end{bmatrix}$?	16) ما قيمة a ، إذ كان $\begin{bmatrix}2 & 2\\1 & 3\end{bmatrix}\cdot\begin{bmatrix}a\\b\end{bmatrix}=\begin{bmatrix}18\\17\end{bmatrix}$ ؟

A	$\frac{1}{4}$	A
B	$\frac{20}{3}$	B
C	5	C
D	2	D

17) Use the figure below to find $\lim_{x\to -2} f(x)$.	17) من الرسم البياني أدناه، ما تقدير $\lim_{x\to -2} f(x)$ ؟



A	-3	A
B	-1	B
C	-2	C
D	Does not exist النهاية غير موجودة	D

18) What are the coordinates of the center of the ellipse represented by the equation $x^2+4y^2-2x+16y+1=0$?	18) ما إحداثيات مركز القطع الناقص الذي معادلته $x^2+4y^2-2x+16y+1=0$ ؟

A	$(-2, 1)$	A
B	$(1, -2)$	B
C	$(-1, 2)$	C
D	$(2, -1)$	D

19) What is the equation of the line that has a slope of -3 and passes through the point $(-2, 3)$?	19) ما معادلة المستقيم الذي ميله -3 ويمر بالنقطة $(-2, 3)$؟

A	$3x+y=-3$	A
B	$3x+y=3$	B
C	$y-3x=-3$	C
D	$y-3x=3$	D

20) The area of a triangle is $8\sqrt{15}\ \text{m}^2$ and the lengths of two of its sides are $\sqrt{5}\ \text{m}$ and $32\ \text{m}$ .What is the angle between these two sides?	20) إذا كانت مساحة مثلث هي $8\sqrt{15}\ \text{m}^2$، و أطوال اثنين من أضلاعه هي $\sqrt{5}\ \text{m}$ وَ $32\ \text{m}$، فما قياس الزاوية المحصورة بين هذين الضلعين؟

A	30°	A
B	135°	B
C	60°	C
D	45°	D

21) What is the inverse function of the function $f(x)=\sqrt{3x-4}$?	21) ما الدالة العكسية للدالة $f(x)=\sqrt{3x-4}$ ؟

A	$f^{-1}(x)=\frac{1}{3}(x+4)^2$	A
B	$f^{-1}(x)=\frac{1}{3}\left(x^2+4\right)$	B
C	$f^{-1}(x)=(3x-4)^2$	C
D	$f^{-1}(x)=\frac{1}{3}(x+2)^2$	D

22) If $\tan\theta=\frac{3}{5}$, find the ratio $\frac{\sin\theta+\cos\theta}{\cos\theta-\sin\theta}$.	22) إذا كان $\tan\theta=\frac{3}{5}$ ، فما هي قيمة النسبة: $\frac{\sin\theta+\cos\theta}{\cos\theta-\sin\theta}$ ؟

A	4	A
B	–1	B
C	1	C
D	– 4	D

23) Solve the trigonometric equation $\sin x\ \tan x-\sin x=0$ for all x in $[0°,180°]$.	23) ما حل المعادلة المثلثية $\sin x\ \tan x-\sin x=0$ لجميع قيم x في الفترة $[0°,180°]$؟

A	$\{90°, 135°\}$	A
B	$\{45°, 90°\}$	B
C	$\{0°, 135°, 180°\}$	C
D	$\{0°, 45°, 180°\}$	D

24) What is the average rate of change for the function $f(x)=2x^2+7x$ between $x=2$ and $x=5$?	24) ما متوسط معدل التغير للدالة $f(x)=2x^2+7x$ بين $x=2$ وَ $x=5$ ؟

A	21	A
B	15	B
C	0	C
D	$\frac{13}{3}$	D

- END OF MATH PRACTICE TEST نـهاية اختبار الرياضيات التدريبي -

الإجابات الصحيحة

رقم السؤال	اختبار الرياضيات Math Test	اختبار اللغة الإنجليزية English Test	Question #
1	B	B	1
2	C	A	2
3	B	C	3
4	D	C	4
5	A	D	5
6	C	A	6
7	D	A	7
8	B	B	8
9	A	B	9
10	D	D	10
11	C	C	11
12	A	C	12
13	A	D	13
14	B	A	14
15	D	C	15
16	C	B	16
17	D	D	17
18	B	A	18
19	A	B	19
20	C	D	20
21	B	A	21
22	A	C	22
23	D	B	23
24	A	D	24