



برای دریافت پاسخنامه سوالات به سایت زیر مراجعه  
فرمایید

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Considérons les deux fractions rationnelles

$$f(x) = \frac{6x+2}{(x+1)(x-1)}$$

$$g(x) = \frac{3x-7}{(x-1)(x-2)}$$

Notons

$$(x+1)(x-1) = 0 \iff (x = -1 \text{ ou } x = 1)$$

$$(x-1)(x-2) = 0 \iff (x = 2 \text{ ou } x = 1)$$

Nous en déduisons

l'ensemble des dénominateurs communs  $D_g$  est :  $D_g = \mathbb{R} - \{-1, 1, 2\}$

Pour tout réel  $x$  de  $D_g$  nous avons :

$$f(x) \pm g(x) = \frac{6x+2}{(x+1)(x-1)} \pm \frac{3x-7}{(x-1)(x-2)}$$

Nous en déduisons successivement :

$$f(x) - g(x) = \frac{(6x+2)(x-2) - (3x-7)(x+1)}{(x+1)(x-1)(x-2)}$$

$$f(x) - g(x) = \frac{(6x^2 - 12x + 2x - 4) - (3x^2 + 3x - 7x - 7)}{(x+1)(x-1)(x-2)}$$

$$f(x) - g(x) = \frac{3x^2 - 6x + 3}{(x+1)(x-1)(x-2)} = \frac{3(x-1)^2}{(x+1)(x-1)(x-2)}$$

Pour tout réel  $x$  de  $D_g$  nous avons  $x-1 \neq 0$

$$f(x) - g(x) = \frac{3(x-1)}{(x+1)(x-2)}$$

کلیه حقوق مادی و معنوی این سوالات متعلق به گروه آموزشی  
بیست و نوا می باشد و کپی برداری و استفاده بدون ذکر  
منبع از لحاظ شرعی و قانونی مجاز نمی باشد



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wonders of creation

1 - Scientists studying about heavenly bodies are trying to prove that there are ..... of life on other planets.

- lakes                       drops                       signs                       cells

2 - As far as I know, ..... 70% of the students in this class are going to take part in the upcoming picnic.

- nearly                       clearly                       cheaply                       early

3 - Last week was the first time that I had ever started to play basketball, and I terribly felt like I was ..... player ever.

- the worse                       bad                       the worst                       worst

4 - All of us were required to sit on the ground in a ..... and talk about the activities we had to take in the following day.

- ring                       body                       trip                       toll

5 - Imam Hossein's Holy Shrine is ..... religious place in the Islamic world.

- more                       much                       the most                       much more

6 - She thinks it's ..... that her friend Mina is absent from school. She may be sick today.

- strange                       healthy                       dangerous                       different

7 - I feel no need to prepare myself for the school running race as I think I'm already ..... one among all.

- faster                       more faster                       more fast                       the fastest

Theories about how the brain works remain a subject of debate. It is agreed, however, that the hippocampus, a part of the brain, is unbelievably important for memory. When we experience something, the information is sent through our neurons to the hippocampus, where it is processed. Scientists believe that brain cells, called neurons, first transform the sensory stimuli we experience into images in our immediate memory. Then, these images are sent to the hippocampus and stored soon in short-term memory. In the hippocampus, information is organized. It is during this process that parts of the image of our experience disappear. Finally, certain information is then transferred to long-term memory, in a section in the frontal area of the brain, known as the cerebral cortex. Scientists believe this process may happen while we are sleeping, but exactly how the information is transferred from one area of the brain to another is a mystery.

8 - This passage is mainly concerned with .....

- how to improve our memory                       an illness that results in severe memory loss  
 the importance of neurons in transferring sensory stimuli                       how human brain processes and stores information

9 - It is pointed out in the passage that .....

- the brain was not considered a highly complex organ in the past  
 damage to the hippocampus does not cause memory loss  
 scientists agree that hippocampus plays an important role for memory  
 hippocampus is in the frontal area of the brain

10 - John was feeling terribly tired last night, so he, in the hope of a refreshing sleep, went to bed ..... usual.

- (1) as early as                      (2) earlier than                      (3) more early than                      (4) the earliest of

11 - The students ..... to hear that the human body is so amazing and can do many things at the same time.

- (1) practiced                      (2) knew                      (3) wondered                      (4) collected

12 - A: "Do the students walk to the bus stop every morning?"

B: "No, the school bus ..... everyone at their house door."

- (1) carries                      (2) keeps                      (3) collects                      (4) donates

13 - Most of the ..... are helpful for your body and ... it against many kinds of illnesses.

- (1) cells – carry                      (2) microbes – clear                      (3) cells – hurt                      (4) microbes – defend

14 - Questions 41-50 are incomplete sentences. Beneath each sentence you will see four words or phrases marked (1), (2), (3) and (4). Choose the one word or phrase that best completes the sentence. Then mark your answer sheet.

A holiday by the sea is ..... than a holiday in the mountains.

- (1) the most good                      (2) better                      (3) good                      (4) best

15 - I love that..... car that is always parked at the end of the street.

- (1) old big green                      (2) old green big                      (3) big green old                      (4) big old green

16 - Nowadays many young people want to donate their ..... to save the lives of those who are at the end of the line for hope.

- (1) cells                      (2) members                      (3) organs                      (4) texts

The Olympic Games will be held in our country. As a great many people will be visiting the country, the government will be building new hotels, a stadium and a fine new swimming pool. They will also be building new roads and a special railway line. The games will be held just outside the capital and the whole area will be called "Olympic City". Workers will have completed the new roads by the end of this year. By the end of next year, they will have finished work on the new stadium. The fine modern buildings have been designed. We are all very excited and are looking forward to the Olympic Games because they have never been held in this country.

17 - When will the workers finish work on the new stadium?

- (1) Before the next year finishes                      (2) In one year  
(3) When Games will be held                      (4) When people visit the country

18 - The Olympic Games will be held in this country .....

- (1) inside the capital and some areas                      (2) for the first time  
(3) every four years                      (4) before next year begins

19 - The government are going to do some work EXCEPT to .....

- (1) build a stadium                      (2) build new hotels                      (3) design modern buildings                      (4) visit the country

20 -

Ordinary people think you have to be skilled in computers to send a message via e-mail but, in fact, it is ..... thing in the world.

- (1) simple                      (2) the simplest                      (3) more simple                      (4) most simple

21 - A: "Which car of these newest models in the show do you prefer?"

B: "I'd like to have..... car than the one I have. It keeps breaking down."

- Ⓐ a very reliable      Ⓑ the most reliable      Ⓒ as reliable as a      Ⓓ a more reliable

22 - In my last holiday, I read a good book, but my father gave me an even ..... one last weekend.

- Ⓐ good      Ⓑ better      Ⓒ better than      Ⓓ the best of

23 - At first, nobody had a ..... understanding of what to do, but after a while all of us realized how we should face the problem.

- Ⓐ clear      Ⓑ alive      Ⓒ fresh      Ⓓ near

24 - Celsius invented his scale ..... observations to determine the shape of the Earth.

- Ⓐ since he has made      Ⓑ while he was making      Ⓒ when he is      Ⓓ was making his

25 - Everybody knows that teachers are ..... anybody else.

- Ⓐ as capable of making mistakes as      Ⓑ the most capable of make mistakes as  
Ⓒ more than capable of making mistakes of      Ⓓ the most capable of making mistakes than

26 - I was put in an emergency situation to make a wise decision. Sadly, a lot of ..... raced through my mind, and I couldn't come out with a reasonable one.

- Ⓐ emotions      Ⓑ actions      Ⓒ knowledge      Ⓓ thoughts

27 - A: "Can I have your ..... pen?"

B: "Sorry, I ..... give it to Zahra."

- Ⓐ nice small new black – am going to      Ⓑ nice black new small – will  
Ⓒ nice small new black – will      Ⓓ nice black new small – am going to

28 - The teacher was able to make his students more interested in studying hard with his ..... words.

- Ⓐ alive      Ⓑ powerful      Ⓒ hard - working      Ⓓ generous

29 - Last time I heard from Tom he had married a ..... woman.

- Ⓐ beautiful Greek young      Ⓑ young beautiful Greek      Ⓒ beautiful young Greek      Ⓓ young Greek beautiful

30 - Justin: Do you like to donate your organs in ..... death?

Bruce: Why not? We can save many lives by doing so.

- Ⓐ cell      Ⓑ plasma      Ⓒ brain      Ⓓ heart

31 - They knew they had to move fast and..... the injured men back, so they didn't want to take along any more weight than necessary.

- Ⓐ carry      Ⓑ defend      Ⓒ drop      Ⓓ hear

32 - The hotel is beautiful. I think it's not ..... the hotel we stayed at in New York, but it's more comfortable.

- Ⓐ the nicest      Ⓑ as nice as      Ⓒ nicest than      Ⓓ as nicer as

33 - Over the last decade or so, many cinemas have been switching to digital projectors as a way to cut costs and improve picture ..... at the same time.

- Ⓐ opinion      Ⓑ material      Ⓒ pattern      Ⓓ quality

34 - One of the main concerns in research principles is to keep the identity of the participants secret during data ..... and reporting process.

- Ⓐ schedule                      Ⓑ health                      Ⓒ paradise                      Ⓓ collection

35 - A: "Did you visit Imam Reza's holy shrine?"

B: "Yes! It was..... religious place we visited during our holidays."

- Ⓐ most amazing                      Ⓑ more amazing than                      Ⓒ more amazing                      Ⓓ the most amazing

36 - The man stopped walking and looked in ..... at us, while we were making strange noises and playing jokes on each other in the street.

- Ⓐ power                      Ⓑ planet                      Ⓒ liquid                      Ⓓ wonder

37 - Maybe you are a ..... football player than me, but you are definitely ..... tennis player I have ever seen in my life!

- Ⓐ good / worse                      Ⓑ better / worse                      Ⓒ good / the worst                      Ⓓ better / the worst

38 - No one doubts that Isfahan is ..... Iran. Last summer we spent a week in Isfahan to discover every corner of it.

- Ⓐ among the most popular tourist destination in                      Ⓑ the popular tourist destination in most of  
Ⓒ one of the most popular tourist destinations in                      Ⓓ most popular tourist destination of

39 - We will be testing everyone over the next few days to make sure they have been placed at the ..... level.

- Ⓐ interesting                      Ⓑ appropriate                      Ⓒ careful                      Ⓓ downward

Hummingbirds are very special for many reasons. For one, they are very small. The smallest kind of hummingbird weighs less than 2 grams. That's less than half the weight of a sheet of paper!

Hummingbirds are also special for the way they fly. They are the only birds that can hover. That means they can stay in one place in the air. Plus, they can fly backwards and even upside down!

All of that flying is supported by hummingbirds' wings. These birds normally beat their wings up to 70 times per second. They can beat their wings much faster when they dive quickly. How does a hummingbird get all the energy it needs to beat its wings and fly? It gets energy from the food it eats! Hummingbirds get a lot of their food from flowers. They drink nectar from flowers using their long, thin beaks and tube like tongues.

When hummingbirds get their food from a flower, they also help the flower. How? By pollinating it! When hummingbirds put their beaks into a tube-like flower, some of the flower's pollen can get on them. Then, when they go to drink nectar from another flower, they move the pollen to that new flower. If the pollen lands in the right place in the flower, the plant will grow new seeds. So hummingbirds help lots of plants survive and grow. These birds are truly special!

40 - Which of the following sentences is NOT true about hummingbirds?

- Ⓐ No other birds can hover like the hummingbirds.                      Ⓑ They can fly backwards and also they can fly upside down.  
Ⓒ They are less than half the weight of a sheet of paper.                      Ⓓ They are one of the birds that can stand still while flying.

41 - According to the 4th paragraph, what can we conclude about hummingbirds?

- Ⓐ They don't need a lot of energy.                      Ⓑ They are lazy birds.  
Ⓒ They need a lot of energy.                      Ⓓ They have to stay in one place.

42 - How do hummingbirds help lots of plants survive and grow?

- (1) Hummingbirds drink nectar from flowers using their long, thin beaks and tube-like tongues.  
 (2) Hummingbirds fly to different flowers to get the food they need so they have a lot of energy  
 (3) Hummingbirds move pollen from one flower to another which helps the plants make new seeds.  
 (4) Hummingbirds do not pollute their surroundings because they drink all the nectar and don't waste it

43 - Which of the following words is defined in the passage?

- (1) hover (2) tube (3) pollen (4) seed

44 - When you want to travel to a country, reading about the culture of that area is ..... to understand the people of that country.

- (1) one of most the important ways (2) one of the most important ways  
 (3) important of the most one ways (4) one most the important of ways

45 - It was ..... that we decided to go out for a walk. We took a long walk through the park.

- (1) such day a lovely sunny (2) such a sunny lovely day (3) such a day lovely sunny (4) such a lovely sunny day

46 - We will be reviewing the papers again over the next few days to make sure students' knowledge has been measured at the ..... level.

- (1) interesting (2) appropriate (3) careful (4) downward

No sound can exist without movement. Sound is made by vibration and travels in waves. The waves move from the vibrating object in every direction, in ever-increasing circles. They disturb the molecules in the surrounding air, so that one molecule hits the next, and so on until the vibration reaches the ear. There, the ear drum vibrates, and the nerves transmit impulses to the brain, which gives them a meaning as sound. If the source of sound vibrates in a vacuum, no sound can be heard. This is because there is no surrounding material (i.e. molecules) to send the sound to the ears. The speed of sound is changed by the material used to send it. That is to say, it travels slowest in the air, faster in a liquid and fastest in a solid.

47 - The vacuum has no surrounding material to let the sound .....

- (1) change (2) disturb (3) travel (4) vibrate

48 - What does "There" in line 3 refer to?

- (1) In the solid (2) In the ear (3) In the liquid (4) In the surrounding ear

49 - What gives meaning to sound?

- (1) The wave circles (2) The disturbed molecules (3) The speed of sound (4) the brain work

50 - According to the passage, the speed of sound .....

- (1) changes depending on the material (2) is the same in every material  
 (3) in a gas is faster than in a liquid (4) depends on the speed of vibration

51 - The phrase "That is to say" can be replaced by .....

- (1) clearly (2) or more exactly (3) normally (4) for the future

52 - Because I had nothing ..... to do, I watched TV and played computer games in my free time.

- (1) good (2) well (3) better (4) best

53 - I have never forgotten the ..... bed in which I used to sleep as a child.

- ① large wooden beautiful brown                      ② beautiful brown large wooden  
③ beautiful large brown wooden                      ④ beautiful large wooden brown

54 - He said walking to the door, "If you can't be honest, don't expect to stand up in a court room and ..... honesty."

- ① defend                      ② drop                      ③ collect                      ④ carry

55 - I can't write as well as you do, but actually I can write far ..... Alex.

- ① as good as                      ② better                      ③ the best                      ④ better than

The North Pole is one of the coldest places on Earth. In winter, it is -20 to -40 degrees Celsius. Ice and snow are everywhere. There are also extreme winds all the time. Jordan Maguire had always wanted to go to the North Pole. In April 2006, his dream came true. The 15-year-old Scottish native traveled to the Pole with a team of six people. He was the youngest boy ever to visit the area (the youngest person ever to reach the North Pole is Alicia Hempleman-Adams. She made the trip in 2005 at age 15.)

Jordan and his team started their journey to the North Pole in Northern Russia. The trip was not easy. The group skied 10 hours every day. The biggest challenge was the weather. But there were other dangers, too; for example, polar bears and large pieces of ice. On the eighth day, the team reached the North Pole. In total, they traveled 111 miles (178 kilometers). As part of the trip, Jordan also made money (\$19,000) for the children's charity Well Child.

So what are Jordan's plans for the future? "I want to visit the North Pole again," he says. "It was incredible."

56 - What is this passage about?

- ① The weather and wildlife at the North Pole                      ② The dangers of traveling to the North Pole  
③ People who live close to the North Pole                      ④ One person's visit to the North Pole

57 - What was the hardest part of Jordan's North Pole trip?

- ① the weather                      ② polar bears                      ③ the ice                      ④ walking

58 - What special thing did Jordan do?

- ① He wrote poetry about the North Pole.                      ② He made a movie about his trip  
③ He made money to help children.                      ④ He climbed a mountain at the North

59 - Which sentence do you think Jordan would say?

- ① The trip to the North Pole was very scary. I'll never go there again  
② The trip to the North Pole was hard but I'm glad I did it.  
③ The trip to the North Pole was a little boring. I didn't like it very much.

The trip to the North Pole was easy. I had a lot of fun.

60 -

They finally decided not to buy that nice ..... carpet because it was very expensive

- ① small red Persian silk                      ② small red silk Persian                      ③ red small Persian silk                      ④ silk small red Persian

61 - The new research reveals that in a/an ..... way some animals' hearts pumps blood more than one thousand times per minute around their body.

- ① amazing                      ② medium                      ③ uninterested                      ④ suitable

62 - James is so cruel that nobody can get along with him. He does not have a ..... of kindness in him.

- ① cell                      ② blood                      ③ ring                      ④ drop

63 - There were two comprehension questions that were read aloud by the teacher and responded to..... by the student.

- ① really                      ② orally                      ③ largely                      ④ differently

64 - Although the government cannot manage to control the increase in the divorce rate, the president insists on ..... his programs against the crisis.

- ① increasing                      ② reporting                      ③ defending                      ④ identifying

Directions: Read the following passage and answer the questions by choosing the best choice (1), (2), (3), or (4). Then mark the correct choice on your answer sheet.

Your digestive system is like a long tube that goes down through your body. Your digestive system breaks down the food you eat. It breaks down food so that your body can use it for energy.

Your teeth grind up food in your mouth and mix it with saliva. You swallow the ground-up food. It goes into your stomach where it gets broken down. Food goes from your stomach to your small intestine. Nutrients pass through the walls of your intestine and into your blood. Your blood carries the nutrients to all parts of your body.

Your body gets rid of any leftover waste products. Liquid waste products go to your kidneys. You get rid of these waste products as urine. Solid waste products go to your large intestine. You get rid of these waste products as feces.

65 - What is the best title for the passage?

- ① Digestive system                      ② Function of the stomach  
③ Function of getting energy from the food                      ④ The way to get rid of waste products

66 - Which one is TRUE according to the passage?

- ① The food is mixed with saliva in our mouth.                      ② The nutrients are carried throughout the body by the intestine.  
③ Kidneys are the place for the solid waste products.                      ④ We get rid of liquid waste as feces.

67 - Food gets broken down in our .....

- ① digestive system                      ② mouth                      ③ stomach                      ④ intestine

68 - What does "it" in line two refer to?

- ① Digestive system                      ② Body                      ③ Food                      ④ Energy

The average human adult has more than 5 liters (6 quarts) of blood in his or her body. Blood carries oxygen and food to living cells and takes away their rubbish. It also gives safe cells to fight diseases and contains platelets that can form a plug in a damaged blood vessel to stop blood loss.

Through the circulatory system, blood adapts to the body's needs. When you are exercising, your heart pumps harder and faster to provide more blood and also oxygen to your muscles. During an illness, the blood gives more white cells to the site of disease, where they gather to fight and kill the harmful microbes.

All of these functions make blood a valuable liquid. Each year in the USA, 30 million units of blood are transfused to patients who need them. Blood is considered to be so valuable that it is also called "red gold" because the cells and proteins it contains can be sold for more than the cost of the same weight in gold.

Ⓐ red cells

Ⓑ white cells

Ⓒ plasma

Ⓓ platelets

70 - Blood is a valuable liquid because it .....

Ⓐ is called red gold

Ⓑ can be sold to those who need it

Ⓒ contains cells and proteins

Ⓓ is of the same weight of gold

71 - According to the passage, when you are exercising .....

Ⓐ blood gives more safe cells to the place of disease

Ⓑ heart works faster and sends more blood with fresh oxygen to the muscles

Ⓒ platelets prevent the blood vessels from losing blood

Ⓓ body sells proteins more than the cost of gold

72 - Blood in body does all of the followings EXCEPT .....

Ⓐ takes oxygen and food to living cells

Ⓑ takes away the useless things

Ⓒ fights illness and prevents bleeding

Ⓓ provides units of blood for patients who need them



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