ĐỀ SỐ 01:

2018 Preliminary National Examinations (Pre-NE)

Part I For question 1 – 12, each correct answer is worth 4 points, 1 point for a blank answer, and 0 point for each incorrect answer.

Q1. Which subtraction has difference of 563?

A. 2561 – 2018 B. 2562 – 2019 C. 2571 – 2008

D. 2661 – 2118 E. 2551 – 2008

Q2. Which one of the followings is a set of even numbers whose sum is 100?

A. 20 42 21 22

B. 42 20 22 24

C. 42 20 36 17

D. 18 36 20 42

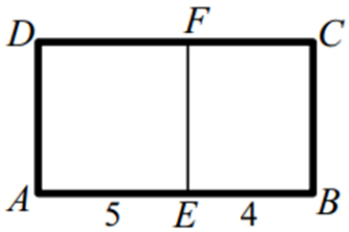
E. 24 18 36 22

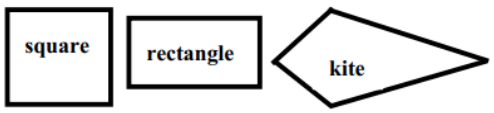
Q3. If 9 × □ = 4 608, which product has the value equal to the number in □?

A. 4 × 64 B. 8 × 32 C. 12 × 32 D. 12 × 64 E. 16 × 32

Q4. Given that ABCD is a rectangle. Let E and F be points on $\overline{AB}$ and $\overline{CD}$ respectively to obtain the square AEFD. AE = 5 and EB = 4. What is the perimeter of BCFE

A. 16 B. 18 C. 20 D. 24 E. 25



Q5. Given 3 quadrilaterals as following figure 

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Each quadrilateral has a number of lines of symmetry. Which one of the followings is the decreasing order of number of lines of symmetry in each shape?

A. square, rectangle, kite B. rectangle, kite, square

C. kite, rectangle, square D. square, kite, rectangle

E. the 3 quadrilaterals have the same number of lines of symmetry

Q6. Given geometric shapes as in the following figure. How many polygons with even numbers of sides are there?

A. 4 B. 5 C. 6 D. 7 E. 8

Q7. Suppose that the 5th of August is Sunday. In the same year, what day is the 5th of September?

A. Monday B. Tuesday C. Wednesday

D. Thursday E. Friday

Q8. A train departs a station at 11:40 and takes 75 minutes to reach destination. At what time will the train reach the destination?

A. 12:15 B. 12:45 C. 12:55 D. 13:05 E. 13:15

Q9. There are 10 teams in Brighton Football League. Each team must play exactly one match with another team. How many matches are there in the league?

A. 10 B. 40 C. 20 D. 45 E. 50

Q10. The following picture chart shows the number of cows in 3 farms.

Farm	Number of cows
A	
B	
C	

Let  represent 15 cows. Which one of the following statements is true?

A. Farm A has 3 cows B. Farm C has 20 cows

C. Farm B has 10 cows D. Farm C has 15 cows more than Farm B.

E. Farm A has the smallest numbers of cows.

Q11. The number of students in a primary school are shown in the following table.

Grade	Number of students
1	139
2	135
3	?
4	136
5	138
6	140
Total	**826**

How many students are in grade 3 of this school?

A. 135 B. 136 C. 137 D. 138 E. 139

Q12. Mary draws a marble from a bag. There are 2 white marbles, 7 green marbles, 1 blue marble, 4 yellow marbles, and 3 red marbles in the bag. What color of marble is the most possible chance to be drawn by Mary?

A. green B. yellow C. red D. blue E. white

Part II For question 13 – 24, each correct answer is worth 6 points, 1.5 points for a blank answer, and 0 point for each incorrect answer.

Q13. Let N be the sum 9 + 99 + 999 + 9999 + 99999. How many digits of N are "9"?

A. 0 B. 1 C. 2 D. 3 E. 4

Q14. Let a, b, c be any one of digit 0 to 9 which make the following symbolic statement is true.

$$a23 + 2b9 + 31c = 1000$$

where a23, 2b9 , and 31c are 3 digit numbers. Which statement is true?

A. b is 1 greater than a. B. The sum of a, b, and c equals 18.

C. a is 5 less than c. D. b is 4 and c is 8.

E. None of these.

Q15. Calculate: 45 × 19 + 23 × 19 + 32 × 19 =?

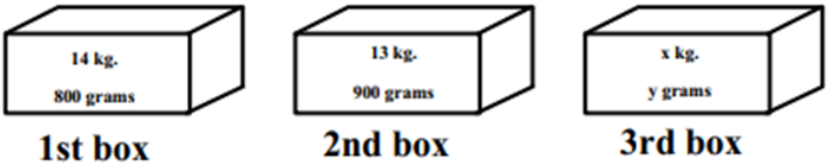
A. 1090 B. 1900 C. 2010 D. 2100 E. 2300

Q16. Capacity of a big carton of milk is 2 liters 50 milliliters and capacity of a glass is 200 milliliters. How many glasses can milk in the big carton be fully poured into?

A. 10 B. 12 C. 13

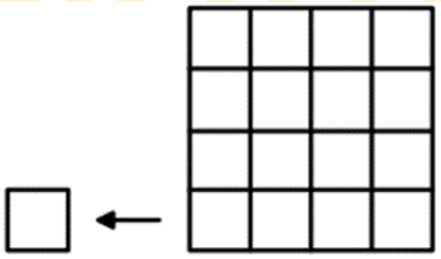
D. 14 E. 15

Q17. There are 3 boxes of apples whose total weight is 42 kilograms 400 grams and weights of the boxes are 14 kilograms 800 grams, 13 kilograms 900 grams, and x kilograms y grams. What is $x + (y \div 100)$?



A. 20 B. 21 C. 22 D. 24 E. 25

Q18. A square consists of 16 small squares. If 3 small squares are taken out of the square to make a polygon with the most possible number of sides, how many sides does the polygon have?



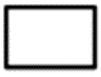
A. 6 B. 8 C. 10

D. 12 E. 16

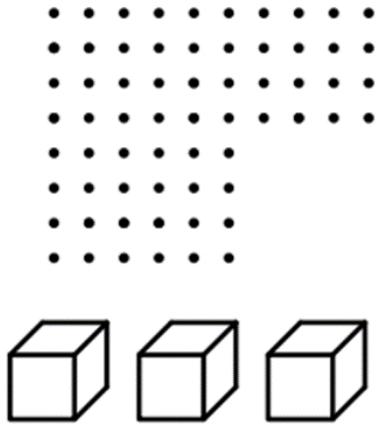
Q19. Given a pattern of shapes as follows:

What is the 29th shape?

A.  B.  C. 

D.  E. 

Q20. Let ● represent a candy. There are a number of candies as in the following figure. Equally divide those candies into 3 boxes as much as possible. Which one of the following statements is true?



A. There are exactly 20 candies in each box.

B. There are 20 candies in each box, and 2 candies left.

C. There are 21 candies in each box, and 1 candy left.

D. There are 21 candies in each box, and 2 candies left.

E. There are exactly 21 candies in each box.

Q21. There are 4 steps to make a pizza as follows:

Step 1: 15 minutes to mix flour

Step 2: 30 minutes to make topping

Step 3: 20 minutes to bake a pizza

Step 4: 10 minutes to decorate pizza

Manee starts to make a pizza during daytime shown as the clock in the figure.

At what time will Manee finish making a pizza?

A. 12:50 B. 12:55 C. 13:05

D. 13:10 E. 13:15

The following information is needed to answer question 22 to 24.

At the 2018 FIFA world cup tournaments, the 32 teams were drawn into 8 groups A, B, C, D, E, F, G, and H of 4 teams. In the first round any two teams played together only one match. Each match the winner got 3 points, no point for the loser. If a match ended in a tie, each team got 1 point. After the first round ended, the first two teams with highest points in each groups would enter to the second round.

Q22. In the first round, the match results of group F consisting of nation teams of South Korea, Sweden, Germany, and Mexico were as follows:

Germany	VS	Mexico	Germany lost	0 – 1
Sweden	VS	South	Korea Sweden won	1 – 0
South Korea	VS	Mexico	South Korea lost	1 – 2
Germany	VS	Sweden	Germany won	2 – 1
Mexico	VS	Sweden	Mexico lost	0 – 3
South Korea	VS	Germany South	Korea won	2 – 0.

After the first round ended, what was the total point of group F?

A. 14 B. 15 C. 16 D. 17 E. 18

Q23. In the first round of the 2018 FIFA world cup tournaments, how many matches in total were there in this round?

A. 24 B. 32 C. 40 D. 48 E. 64

Q24. After the first round of the 2018 FIFA world cup tournaments ended, what was the possible minimum total points of 4 teams?

A. 10 B. 11 C. 12 D. 13 E. 14

PART III For questions 25 – 29, each correct answer is worth 7 points and 0 point for each incorrect or blank answer.

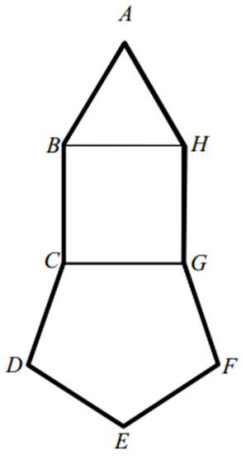
In the case that an answer is not integral, students have to put the most nearest integral answer. Students have to answer the last five digits in the case that the answer from calculating is more than 5 digits.

Q25. What is the next number?

125, 362, 127, 364, 129, 366, 131, ...

Q26. In the given figure, the equilateral octagon ABCDEFGH consists of the equilateral triangle ABH, the square BCGH, and the equilateral pentagon CDEFG. The area of the square BCGH is 19 square units. What is the perimeter of the equilateral octagon ABCDEFGH equals to?

(Area of a square = length of side × length of side)



Q27. What is the number which is divided exactly by 6 and its value is nearest to 1000?

Q28. Let $\overline{TMC}$ represent a 3-digit number where different letters represent different digits. If TMC × $\overline{T'M}$ = 2560, what is the value of TMC + $\overline{T+M}$?

Q29. A game of putting marbles in a row of 10 small squares, there are two players. The rule of the game are the following:

(i) The players alternate turns.

(ii) Each player, when it is their turn, put at least one marble but not exceed 5 marbles into the squares. The players must put marbles started from the most left square continuously.

The last player who put marble (s) is the loser.

For example :

A and B are players and player A begins the game.

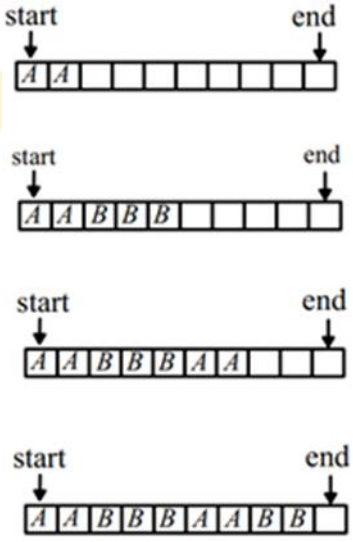
Turn 1 : Player A puts 2 marbles.

Turn 2 : Player B puts 3 marbles.

Turn 3 : Player A puts 2 marbles.

Turn 4 : Player B puts 2 marbles.

Turn 5 : Only one square is left. Player must put a marble. The loser is player A.



A winning strategy for this game is that player who puts marbles at first is always the winner.

If there is a row of 30 squares in the game, how many marbles should the player in Turn 1 put in squares in order to guarantee a win

Bonus Question (Student may or may not give the answer)

A correct answer is worth 20 points. An incorrect answer is lost 7 points and 0 point for blank answer.

In the case that an answer is not integral, students have to put the most nearest integral answer. Students have to answer the last five digits in the case that the answer from calculating is more than 5 digits.

Q30. Mary and David play a game of guessing a row of 4 digits each of which can be any one of 0 to 9 and without repeating. Mary writes 4 digits on a piece of paper and David guesses the 4 digits. Each time David guesses the 4 digits, Mary will tell the number of right digits and right positions in the row of the 4 digits being guessed.

For example, Mary writes a row of 4 digits as 2561 and David guesses as 2018. That is "David guesses 2 right digits (2 and 1) and 1 right position (2 is in the first position)".

Suppose that David guesses 5 times a row of 4 digits written by Mary and Mary tells the number of right digits and right positions as in the following table.

Time	David guesses	Mary tells	
		Number of right digits	Number of right positions
1	2345	1	1
2	6789	1	1
3	0123	3	0
4	1037	2	1
5	2061	3	3

What is the row of 4 digits written by Mary?

ĐỀ SỐ 02

1. Compare m and n, given that m is right before number 99 and n is right after number 98.

A. m < n B. m = n C. m > n D. m # n E. m = n + 1

2. A rectangle with a circumference of 80 cm. If the length is increased by 5 cm, then the area increases by 75 cm2. What are "the width x the length"?

A. 20 cm x 25 cm B. 20 cm x 15 cm C. 15 cm x 25 cm

D. 25 cm x 15 cm E. 25 cm x 20 cm

3. One store in two days sells 120 kg of rice, the first day if it sells another 5 kg of rice, it will be 4 times more than the second day. How many kilograms of rice were sold on the first day?

A. 80 kg B. 65 kg C. 95 kg D. 90 kg E. 110 kg

4. Anna takes 36 minutes to fold 9 boats, Jayki takes 30 minutes to fold 6 boats. Who will finish first if Anna folds 5 boats and Jayki folds 4 boats (Both of them start at the same time).

A. Anna B. Jayki C. They will finish at the same time

D. 20 E. 40

5. In a flower making contest, Sam made 25 flowers. Sam made 5 flowers less than Jack and only half of Mia's flowers. How many flowers did three of them make?

A. 30 B. 55 C. 60 D. 105 E. 3

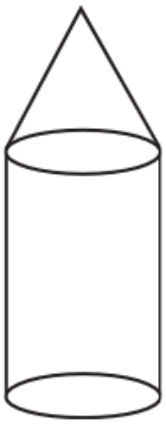
6. Mr. Brown bought 6 towels. All the towels were the same price. The total cost was $84. How much money did each towel cost?

A. $90 B. $14 C. $75 D. $504 E. $78

7. How many terms are there in a row from 2 to 246?

A. 244 B. 245 C. 238 D. 243 E. 200

8. Which shapes make up this solid object?



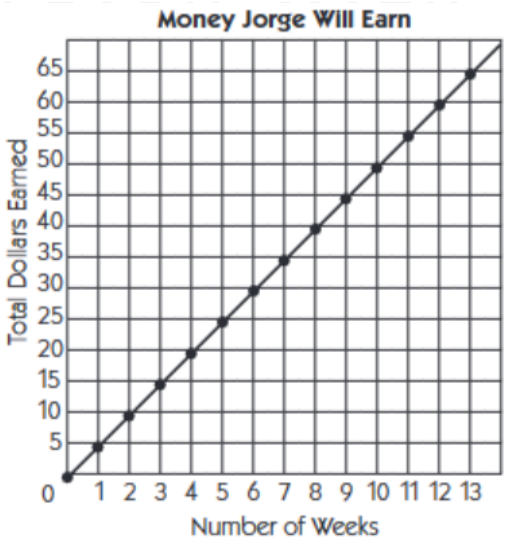
A. triangle and cylinder B. circle and triangle C. cone and cylinder

D. rectangle, triangle, and circle E. None of the above

9. Kate was helping Mr. John get ready for Family Math Night. Eight families were coming. Kate needed to count out 4 square pattern blocks and 3 triangle pattern blocks for each family. How many pattern blocks did she count out altogether?

A. 50 B. 56 C. 49 D. 54 E. 40

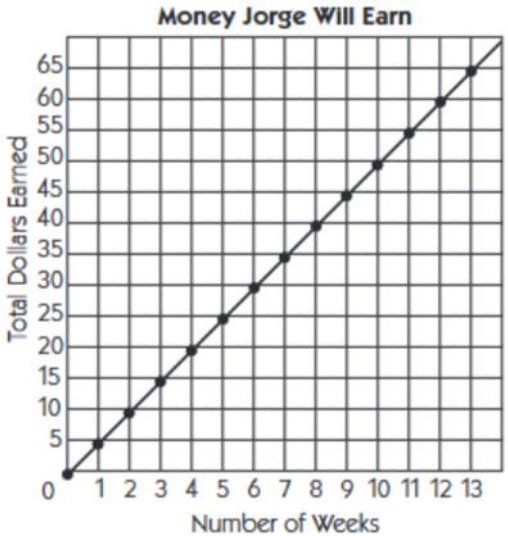
10. Jorge wants to buy a digital music player that costs $50. He offered to water his neighbor's plants for $5 per week. The graph below shows how much money Jorge will have if he saves it all.



How long will it take Jorge to earn $20?

A. 2 weeks B. 3 weeks C. 4 weeks D.5 weeks E. 6 weeks

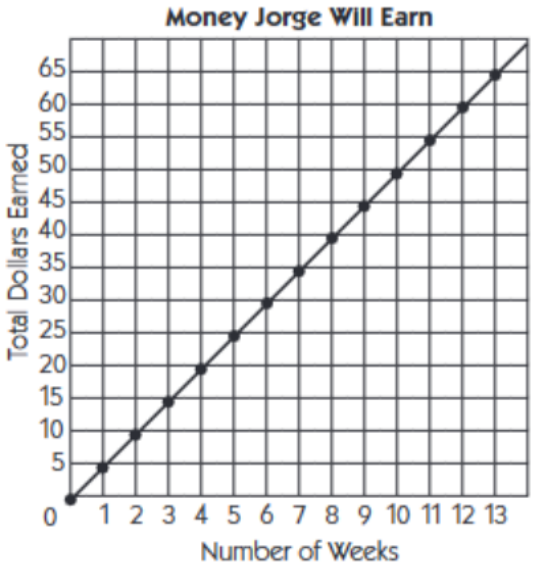
11. Jorge wants to buy a digital music player that costs $50. He offered to water his neighbor's plants for $5 per week. The graph below shows how much money Jorge will have if he saves it all.



How long will it take Jorge to earn enough money to buy the music player?

A. 9 weeks B. 10 weeks C. 11 weeks D. 12 weeks E. 13 weeks

12. Jorge wants to buy a digital music player that costs $50. He offered to water his neighbor's plants for $5 per week. The graph below shows how much money Jorge will have if he saves it all.



If Jorge spent $20 after the 7th week, how many weeks in all would it take him to have enough money to buy the music player?

A. 6 weeks B. 8 weeks C. 9 weeks D. 10 weeks E. 11 weeks

13. Ralph's mom said he and his brother could go to a movie while she went shopping. She dropped them off at the theater at 1:45 and said she would be back at 4:00 to get them. They had three choices of movies. Which movie could they see and be done by the time their mom came to get them?

Movie	Start Time	Length (Including Previews)
Beetle Goes to Town	1:55	130 minutes
Arctic Adventure	2:00	125 minutes
Rainy Day Dog	2:15	100 minutes

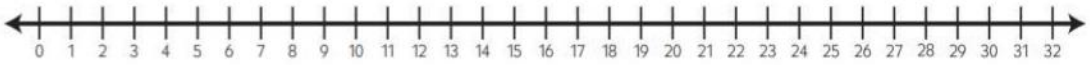
A. Beetle Goes to Town B. Arctic Adventure C. Rainy Day Dog

D. None E. All

14. The pet shop got 84 fish. They sold 34 of the fish right away. They divided the rest of the fish into 2 tanks. How many fish were in each tank?

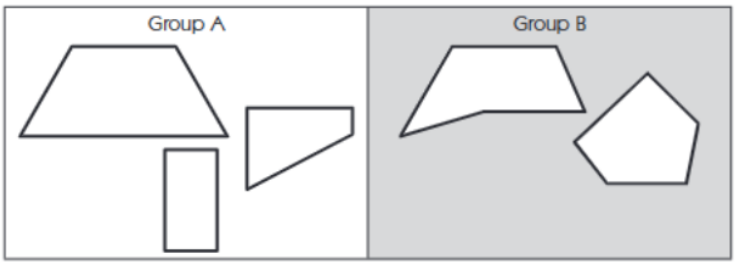
A. 50 B. 25 C. 236 D. 120 E. 118

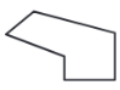
15. Frank the frog goes 4 feet each time he jumps. How many times will he have to jump to make it 32 feet? Use the number line below to help.



A. 36 B. 28 C. 8 D. 9 E. 12

16. Which of the following shape that belongs in group B?



A.  B.  C.  D.  E. 

17. Which number is 6 more than 1026?

A. 1022 B. 1032 C. 1122 D. 1132 E. 1033

18. Find the day of the week that is 40 days from a Monday.

A. 47 B. Monday C. Saturday D. Tuesday E. Friday

19. At the movies Laura got a large popcorn. Her sister Susan got a small popcorn. They each ate half their popcorn. Who ate more popcorn?

A. Susan B. His brother C. 2 D. 1 E. Laura

20. Which story problem can be solved using the expression 3 × 4?

A. Missy, Margo, and Davis buy some pears at the store. They each buy 4 pears. How many pears do they have altogether?

B. Missy lives 3 miles from school. Kerry lives 4 miles from school. How much farther does Kerry live from school than Missy?

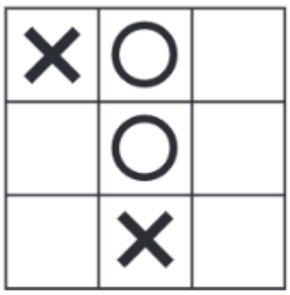
C. Missy, Liz, Dao, and Larry have a total of 4 feet of rope. They each have the same length of rope. How much rope does each person have?

D. Missy has 3 pounds of strawberries. She gives the same amount to each of 4 friends. How many pounds of strawberries does each friend get?

E. None of the above

21. Isaac and Jana are playing tic-tac-toe on the game board shown below.

Tic-Tac-Toe Game Board

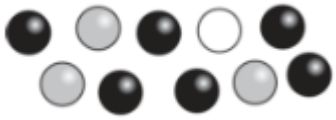


Each of the squares equals 1 square inch. What is the total area, in square inches, of the blank squares on the game board?

A. 3 square inches B. 4 square inches

C. 5 square inches D. 9 square inches

22. William put 10 marbles in a paper sack. Six of the marbles were black, three were gray, and one was white.



William closed her eyes and took one marble out of the sack. Is it certain, likely, unlikely, or impossible that the marble she picked was white?

A. Certain B. Unlikely C. Impossible

D. Likely E. Evenly

23. The table shows the number of colored pencils needed for different numbers of students.

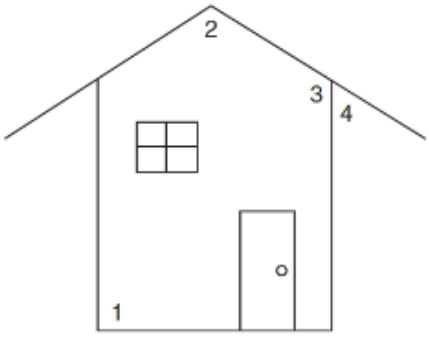
Colored Pencils

Number of Students	Number of Pencils
1	4
2	8
3	12

If each student gets the same number of pencils, how many are needed for 6 students?

A. 22 B. 24 C. 26 D. 27 E. 29

24. Look at the four angles marked on the picture of a house.



Which angle is a right angle?

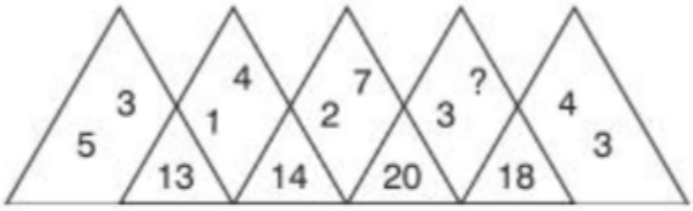
A. Angle 1 B. Angle 2 C. Angle 3 D. Angle 4 E. Angle 2 and 4

25. Neo wanted to put a fence around his vegetable garden patch. His brother asked him to put a fence around his garden patch too. Neo's garden patch was 5 feet wide and 10 feet long. His brother's patch was 6 feet wide and 7 feet long. How many feet of fencing will Neo need?

26. Frank, Joe, and Carl went with their grandma to the bakery. She said that they could use the change she got back to buy mini-chip cookies to share equally. She bought a cake for $11 and two loaves of bread for $2.70 each. She paid with a $20 bill. The mini-chip cookies cost 40¢ each. How many cookies did each boy get?

27. It is Rick's turn to bring oranges for his soccer team to eat at half-time. There are 15 people on his team. He wants each person to be able to eat 2 oranges. Oranges cost $1.20 per pound, and each orange weighs about half a pound. About how much will it cost for Rick to get enough oranges for the team?

28. What number should replace the question mark?

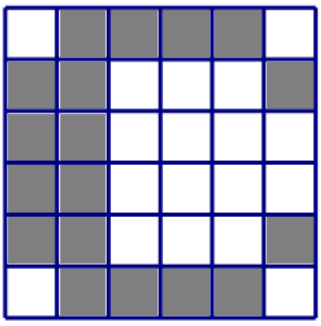


29. Gregory's mom said to him, "You drink too much soda!" Gregory said, "I only drink 3 cans of soda a day." His mom said that was way too much. If there are 12 ounces of soda in each can, how many ounces of soda does Gregory drink every week?

30. Elly and her sister Jiko were planting a garden. They made two beds to plant flowers. One was 6 feet by 5 feet. The other was 7 feet by 7 feet. They want to outline the beds with bricks that are each 1 foot long. How many bricks will they need to outline both beds?

ĐỀ SỐ 03:

Q1. The area of each small square is 1 cm2. What is the area of the shaded region below?



A. 16 B. 17 C. 18 D. 19 E. 20

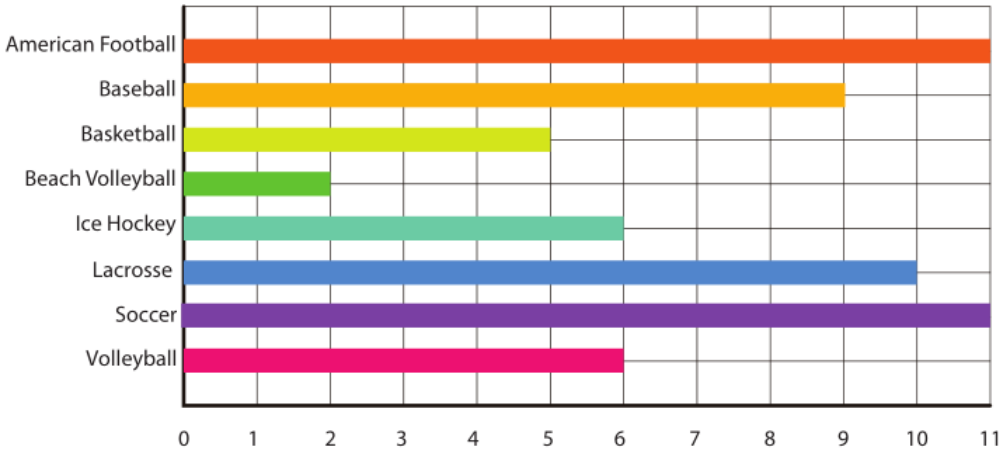
Q2. What number must replace the ☐ in the mathematical sentence ☐ + 8 = 23 − 7 to make it correct?

A. 5 B. 6 C. 7 D. 8 E. 9

Q3. A factory will pack 369 apples equally in 9 boxes. How many apples will be packed in each box?

A. 40 B. 42 C. 41 D. 39 E. 52

Q4. The table below shows the number of people on the field in each team in some types of sport. Use it to answer the question below:

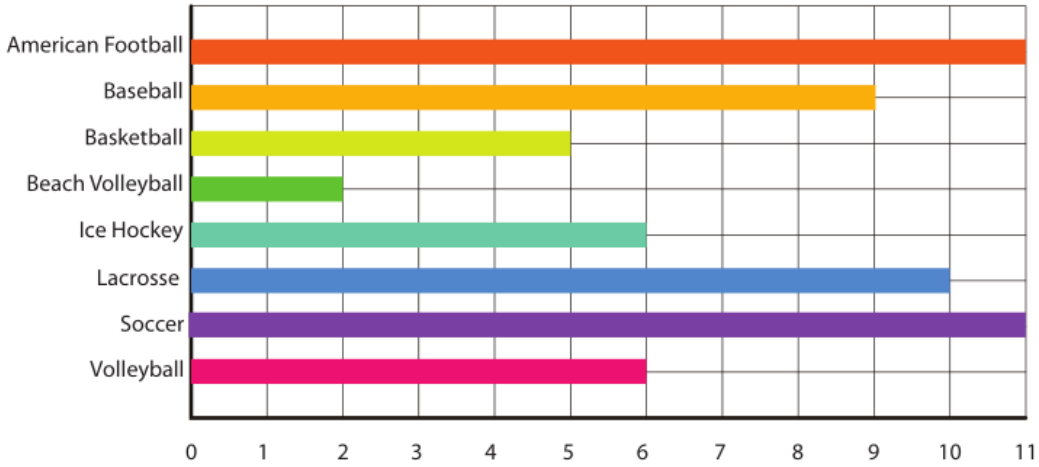


Which sport has the least number of players on the field?

A. Basketball B. Beach volleyball C. Volleyball

D. Ice hockey E. Soccer

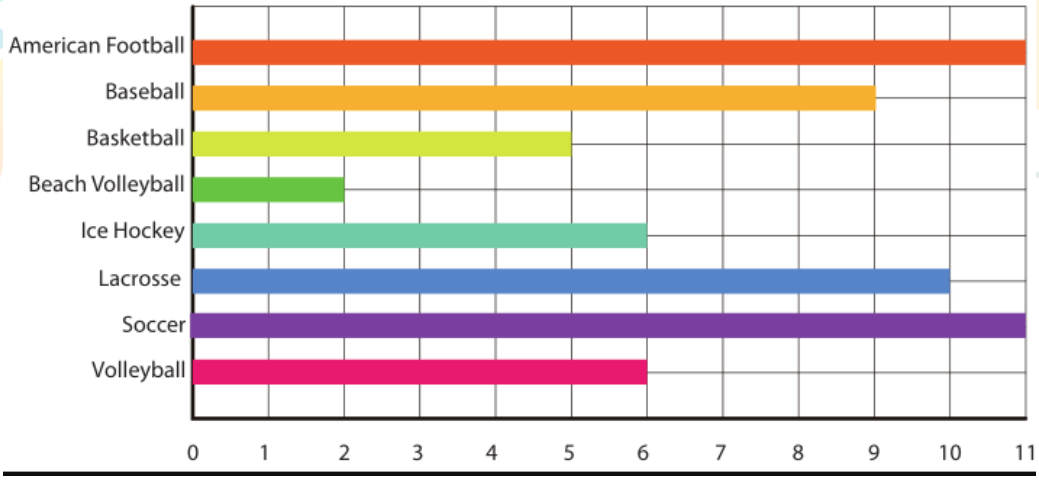
Q5. The table below shows the number of people on the field in each team in some types of sport. Use it to answer the question below.



many more players does the basketball have more than beach volleyball on the field?

A. 3 B. 4 C. 5 D. 6 E. 7

Q6. The table below shows the number of people on the field in each team in some types of sport. Use it to answer the question below.



How many fewer players does the lacrosse team have than the soccer team?

A. 1 B. 2 C. 3 D. 4 E. 5

Q7. Lana is a student in grade 3. Which of the following is the closet approximation to her age?

A. 400 hours B. 400 days C. 400 weeks

D. 400 months E. 400 years

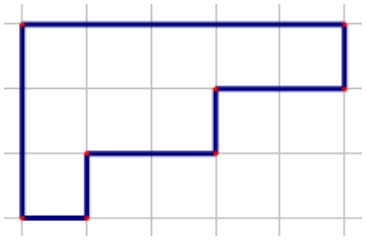
Q8. We want to cut a 30 m stick into shorter sticks of length 6 m. We can only cut one piece of stick at a time. How many cuts are required?

A. 3 B. 4 C. 5 D. 6 E. 7

Q9. A bag of flour weighed 1800g. A baker used 1/3 of the flour. Then he used 2/3 of the remaining. How many grams of flour were left then?

A. 400g B. 800g C. 300g D. 120g E. 180g

Q10. If the area of each small square is 1 cm2, find the perimeter of the figure below.



A. 14 cm B. 16 cm C. 18 cm D. 20 cm E. 24 cm

Q11. Anna and Bach are planting to hire some benches and sofas for their home party next week. A bench can serve 6 guests while a sofa is suitable for two guests only. What is the least number of benches and sofas needed to serve 58 guests such that every guest will have a seat (no empty seat)?

A. 8 benches and 5 sofas. B. 9 benches and 2 sofas. C. 10 benches.

D. 29 sofas. E. None of these above.

Q12. When a number is divided by 6, the quotient is 12 and have a remainder. Find the greatest value of that number.

A. 58 B. 62 C. 72 D. 65 E. 77

Q13. C and D are two points on the segment AB, as shown in the diagram below. If AD is 30 cm longer than BD and AC is 14 cm shorter than BC, what is the length, in cm, of CD?

A. 22 B. 24 C. 26 D. 28 E. 30

Q14. Let us fold a square piece of paper along a diagonal to make a triangle. Cut a small round hole near each of the three corners of the triangle. How many holes will appear on the piece of paper when we unfold it?

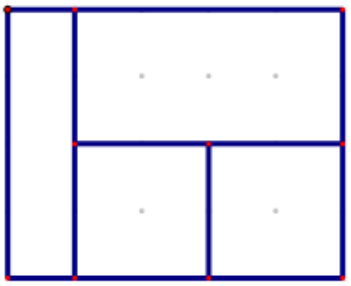
A. 6 B. 7 C. 8 D. 4 E. 10

Q15. Find the next number in the sequence:

1, 2, 4, 7, 11, 16, …

A. 22 B. 24 C. 23 D. 25 E. 27

Q16. How many rectangles are there in the following figure?



A. 4 B. 5 C. 6

D. 7 E. 8

Q17. Max through four darts at the target shown in the diagram. All four darts hit the target, each scoring a different number of points. What is the largest score Max could get?

A. 34 B. 10 C. 16 D. 20 E. 24

Q18. Calculate mentally: 100 - 99 + 98 - 97 + 96 - 95 +...+ 2 - 1

A. 100 B. 50 C. 49 D. 51 E. 25

Q19. Betty likes calculating the sum of the digits that she sees on her digital clock. What is the smallest sum she can get from 13:00 to 21:00 if the clock is in a 24-hour platform?

A. 2 B. 3 C. 4 D. 5 E. 6

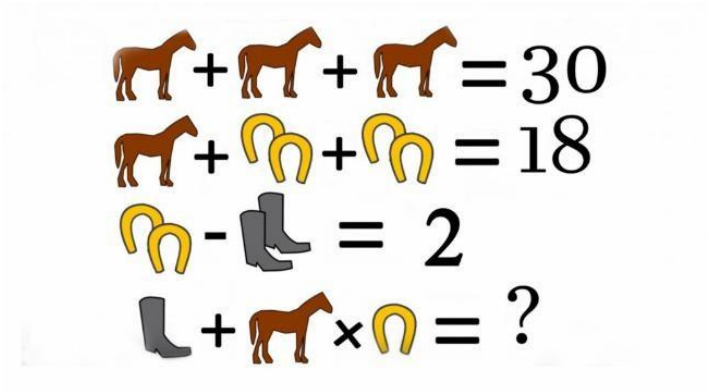
Q20. The word "2019ITMC" appears on the screen. After each minute, the leftmost character moves over to become the rightmost character. How many minutes will elapse before the word "2019ITMC" appears on the screen once again?

A. 5 B. 6 C. 7 D. 8 E. 9

Q21. Jerry has to get the cake from the bakery to the wedding hall. The drive will take him 1 hour and 20 minutes. If the cake needs to be there by 4:15, what time must he leave by?

A. 2:55 B. 3:35 C. 3:05 D. 3:45 E. 4:15

Q22. What is the value of the question mark below?

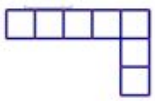


A. 21 B. 41 C. 22 D. 42 E. 30

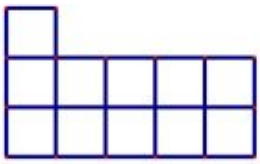
Q23. Annie fell asleep at 9:30 PM and woke up at 6:45AM the next morning. Her brother Martin had been sleeping 1 hour 50 minutes longer. How many hours and minutes had Martin been sleeping?

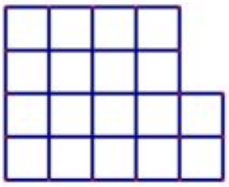
A. 30 hour 5 min B. 11 hour 35 min C. 11 hour 5 min

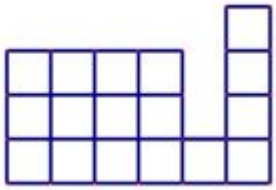
D. 9 hour 5 min E. 8 hour 35 min

Q24. Which of the following figures can be combined with the given one tho form a 3 by 6 rectangle  ?

A. 

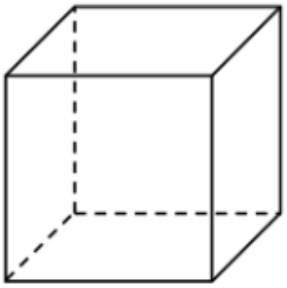
B. 

C. 

D. 

Q25. This summer, in harvesting strawberries in his uncle's farm, Shield harvested one kilogram more each day than the preceding day. On the fourth day, he brought home 39 kilograms of strawberries. After 9 days, his uncle said that there might be about 48 kilograms of strawberries more to go. How many kilograms of strawberries did Shield harvest in total this summer?

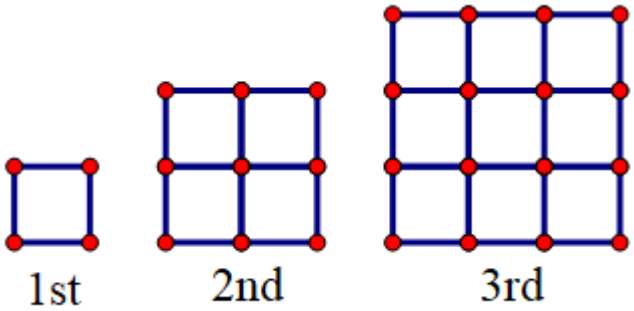
Q26. The six faces of a cubical dice are labeled with six different whole numbers. If the numbers on any two adjacent faces differ by at least 2, what is the minimum value of the sum of these six numbers?



Q27. The first four terms of a series of numbers are 2, 0, 2, 4 and a pattern has been discovered that the 4th term happens to be the sum of the first 3 terms. The same pattern will be applied for all the succeeding terms: that is the 5th term is the sum of the first 4 terms, the 6th term is the sum of the first 5 terms. What is the unit digit of the 100th term?

Q28. Ten years ago, the total age of Mark and his two sons was 45. Ten years later, Mark will be 26 years older than his elder son and 34 years older than the younger one. How old is Mark now?

Q29. In the figures below, each small square is made of 4 matchsticks. How many matchsticks will you need to build up the 10th figure in the pattern?



Q30. There are two groups of people. If they get into rows of 8, there will be 7 people short to make the last row. If they get into rows of 7, there will be 6 people extra who cannot be put into rows. If one of the groups has 5 more people than the other, find the smallest number of people in the larger group.

ĐỀ SỐ 04:

Q1. The product of two numbers is 816. If one number is 6 then what is the other number?

A. 136 B. 116 C. 810 D. 822 E. 16

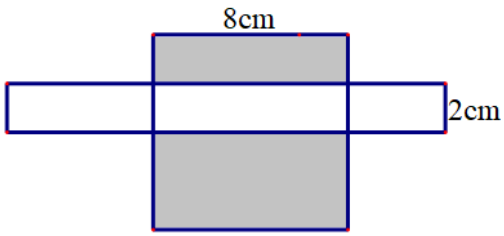
Q2. What operation signs must replace the ◯ and □ so that the mathematical sentence 9 + 8 + 2 = 2 ◯ 8 □ 3 is correct?

A. + for ◯ and × for □ B. × for ◯ and – for □

C. + for ◯ and ÷ for □ D. × for ◯ and ÷ for □

E. × for ◯ and + for □

Q3. A square with the side length of 8 cm is overlapped by a piece of rectangular paper. Suppose that the width of the rectangle is 2 cm and putted parallel to one side of the square. Find the area of the non-overlapped region of the square (the shaded region).



A. 16 cm2 B. 32 cm2 C. 38 cm2 D. 56 cm2 E. 62 cm2

Q4. Walter has two options in going to Daisy's birthday party. He can (a) walk 8 minutes to the bus stop, and rides the bus for 15 minutes to Daisy's house, or, (b) wait at home for 15 minutes, then Mike will come and pick him up. It takes them 7 minutes driving from Walter's house to the party. What is the minimum number of minutes required for him to get to the party?

A. 20 B. 22 C. 23 D. 25 E. 33

Q5. Starting from his house, Jose walked 500 m to the North to reach the bus stop, then the bus ran 500 m to the West. If the bus stopped right in front of the school gate, in which direction from Jose's house is his school?

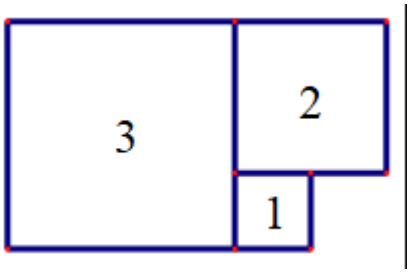
A. East B. South C. Northwest

D. North E. West

Q6. Find the sum of the greatest 3-distinct-digit number and the smallest 3-distinct-digit number.

A. 987 B. 1089 C. 1099 D. 1189 E. 885

Q7. Find the perimeter of the 3rd square if the perimeter of the 1st and 2nd square are 12cm and 24cm respectively.



A. 24 cm B. 28 cm C. 32 cm D. 36 cm E. 40 cm

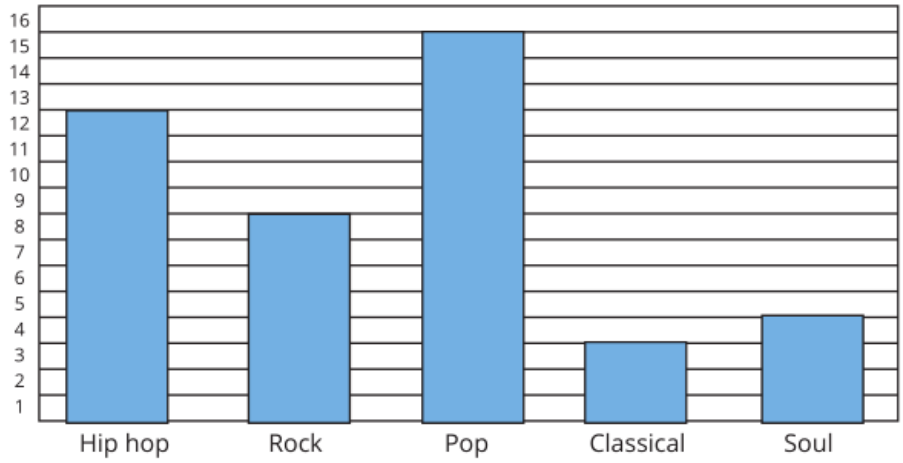
Q8. A snail tried to climb up a vertically wall. In the first time, it tried to climb 6 meters upward, but it unfortunately slid 4 meters downward. In the second time, it climbed 8 meters upward, and slid 7 meters downward, and then it rests. How many meters apart are the current position and the initial position of the snail?

A. 1 B. 3 C. 4 D. 6 E. 8

Q9. The weight of 4 bags of wheat is 824 kg. What is the nearest weight of 1 bag of wheat?

A. 200 kg B. 300 kg C. 210 kg D. 100 kg E. 820 kg

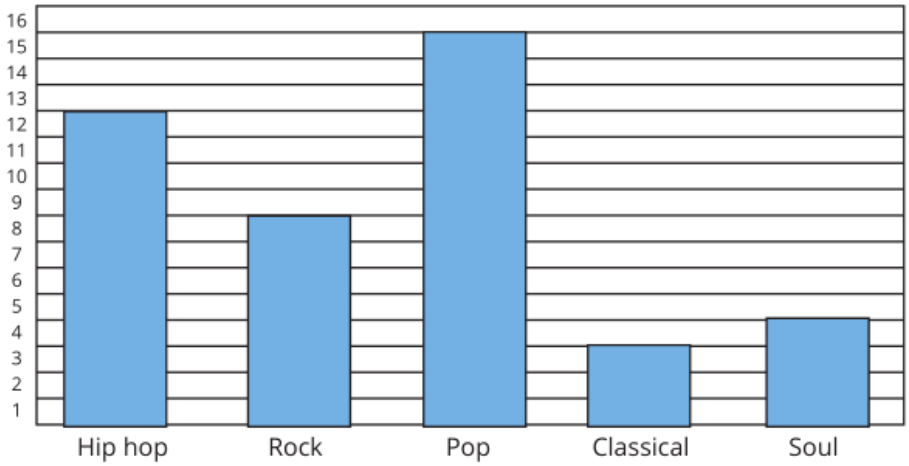
Q10. All students in a class voted for their favorite kinds of music and the result was shown in the table below.



How many students are there in the class?

A. 32 B. 35 C. 38 D. 42 E. 47

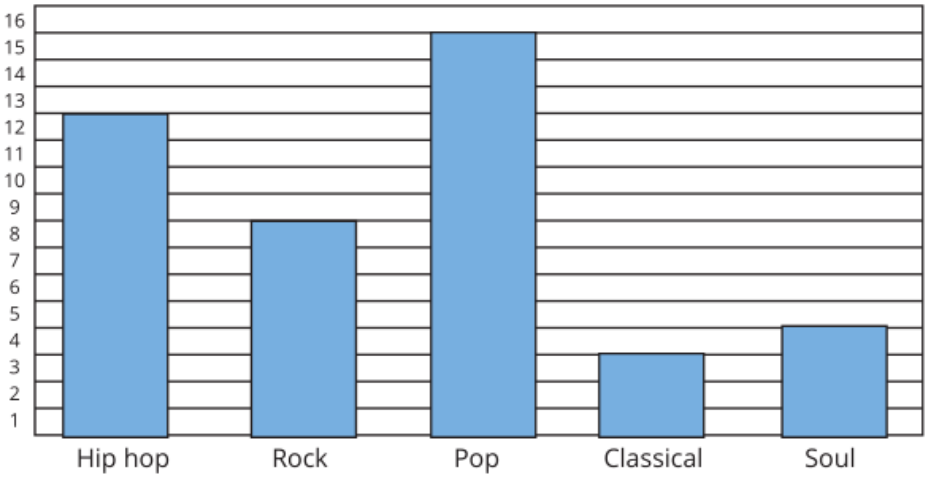
Q11. All students in a class voted for their favorite kinds of music and the result was shown in the table below.



What is the most popular type of music in this class?

A. Hip hop B. Rock C. Pop D. Classical E. Soul

Q12. All students in a class voted for their favorite kinds of music and the result was shown in the table below.



How many more people favor hip hop over classical?

A. 12 B. 10 C. 9 D. 8 E. 7

Q13. A bamboo stick is lowered vertically into water to a depth of 50 cm, and a mark is made on the stick at the point of immersion. The stick is then taken out and turned upside down. Then it is lowered vertically into water to a depth of 50 cm, and a mark is made on the stick at the point of immersion. If the distance between the two marks is 25 cm, what are the possible lengths, in cm, of the bamboo stick?

A. 75 B. 100 C. 125 D. 75 or 125 E. 150 or 250

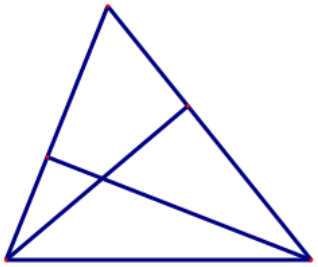
Q14. In a race between A, B, C, D and E, A is faster than B, C is faster than D, C is slower than E, D is faster than B, and E is slower than A. Which racer is the third fastest?

A. A B. B C. C D. D E. E

Q15. Giving that the sum of all digits in number 10231023…. is 2022, what is the last digit of this number?

A. 0 B. 1 C. 2 D. 3 E. 4

Q16. How many triangles can be found in the figure below?



A. 4 B. 5 C. 6

D. 7 E. 8

Q17. Sixty soldiers numbered from 1 to 60 stand in a row. The commander announces, "Will those numbered from 1 to 20 inclusive take one step forward, and those numbers from 41 to 60 inclusive take one step backward." How many soldiers remain in place?

A. 9 B. 10 C. 11 D. 20 E. 21

Q18. A huge chicken farm distributed exactly 604 boxes of eggs every day in the city. If each box holds 9 eggs, how many eggs can the farm produce each day?

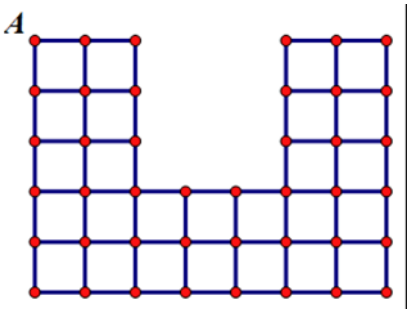
A. 5336 B. 5436 C. 595 D. 613 E. 5536

Q19. Helen is 156 cm high and Bob is 18 cm taller than her. What is their total height?

A. 312 cm B. 32 dm and 5 cm C. 3 m and 30 cm

D. 320 cm E. 33 dm and 5 cm

Q20. There are grid points shown in the diagram where the side of each small square is 1 cm. Starting from point A, an ant crawls from point to point along the grid lines, and return to A. If it can pass each point only once, what is the maximum length of its path, in cm?



A. 30 B. 42 C. 48 D. 54 E. 93

Q21. In a certain number sequence, the 1st term is 20, the 2nd term is 14. Starting with the 3rd term, the number can be obtained by getting the difference between the larger and the smaller previous two terms. For instant, the 3rd term is 6, the 4th term is 8. Following the pattern that we defined in the previous term, find the value of the 2019th term.

A. 0 B. 2 C. 4 D. 6 E. 8

Q22. Eight empty bottles can be traded in for an ice-cream. What is the maximum number of ice-creams that can be obtained from 34 empty bottles?

A. 1 B. 2 C. 3 D. 4 E. 5

Q23. Digital clock shows the time 20:07. What is the least time period in order to see again the same four digits (in some order) on the clock?

A. 4 h 20 min B. 6 h 00 min C. 10 h 55 min

D. 11 h 13 min E. 24 h 00 min

Q24. What is the minimum number of straight cuts required to divide a cylindrical cake into sixteen identical pieces?

A. 1 B. 2 C. 3 D. 4 E. 5

Q25. The figure below shows a first part of Senna's necklace. If the beads are arranged in the same pattern after that, how many white beads will be used on this necklace if there are 150 beads in total?

Q26. On the clock face below, Anna drew 2 straight lines which divided the clock into 3 regions. If the sums of numbers in all regions were equal, what was the smallest sum of two consecutive numbers of which one of the lines passed through the middle?

Q27. A squirrel swallowed a total of 205 nuts in 5 days. Each day that squirrel ate eight more than it did on the previous day. How many nuts did it eat on the first day?

Q28. I am a 3 digit number and I am less than 200. The digit in tens place is four times as many as the digit in ones place. The result when adding digits in tens place and ones place is 10. What number am I?

Q29. Charles had some 10 cent coins. He put them into stacks of 19 coins each and found that one of the stacks was short of 8 coins. When he rearranged the coins so that there were 18 coins in each stack, he found that he was left with three extra coins. Find the smallest total value of all his coins.

Q30. Andrew, Catherine, Michael, Nick and Sally ordered different items for lunch. These are (in no particular order): cheese sandwich, chicken rice, duck rice, noodles and steak. Find out what Catherine had for lunch if we are given the following information: i. Nick sat between his friend Sally and the person who ordered steak. ii. Michael does not like noodles. iii. The person who ate noodles is Sally's cousin. iv. Neither Catherine, Michael nor Nick likes rice. v. Andrew had duck rice.

ĐÁP ÁN ĐỀ SỐ 01

Question	A	B	C	D	E
1			✓		
2					✓
3					✓
4		✓			
5	✓				
6		✓			
7			✓		
8			✓		
9				✓	
10				✓	
11				✓	
12	✓				
13	✓				
14	✓				
15		✓			
16	✓				
17	✓				
18					✓
19		✓			
20			✓		
21				✓	
22					✓
23				✓	
24			✓		
25	368				
26	112				
27	1002				
28	263				
29	5				
30	2081				