ĐỀ SỐ 03

1. What is the next number in the sequence: 1, 5, 13, 29, 61, ...

   A. 68   B. 75   C. 81   D. 94   E. 125

2. Which one of the following digits does not appear in the right answer of "two thousand nine hundred fifty-two plus two thousand twenty"?

   A. 9   B. 7   C. 5   D. 4   E. 3

3. A number gives a remainder of 2 when divided by 10. Another number gives a remainder of 3 when divided by 10. The sum of these two numbers is multiplied by 4 to give the third number. What is the remainder when this third number is divided by 10?

   A. 2   B. 3   C. 4

   D. 5   E. None of the above

4. What is the value of (6/5) / 20?

   A. 25   B. 6   C. 1   D. 0.06   E. 0.6

5. What is the value of 29.25 + 20.24?

   A. 45.54   B. 45.67   C. 49.49   D. 49.94   E. 50.79

6. Lam cuts a pizza into quarters. Then he cuts every quarter into thirds. What part of the whole pizza is one piece?

   A. a third   B. a quarter   C. a seventh   D. an eighth   E. a twelfth

7. A rectangular box has a width of 10 m, a length of 12 m. We cut each side of the rectangle by 2 meters. What is the area of the cut portion?

   A. 30   B. 40   C. 50   D. 60   E. 70

8. A square has a perimeter of 80. Find the area of the circle which radius equals to one side of the square.

   A. 400pi   B. 500pi   C. 600pi   D. 700pi   E. 800pi

9. A zoo has 96 chickens and ducks altogether. The ratio of the number of chickens to the number of ducks is 5:3. How many chickens does the zoo have?

   A. 30   B. 45   C. 60   D. 68   E. 76

10. How many multiples of 6 which are greater than 20 and less than 50?

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

11. A box contains 4 red, 3 yellow, 4 blue, and 4 green marbles. What is the probability of taking a marble that is not yellow out of the box?

A. $\frac{1}{2}$ B. $\frac{3}{4}$ C. $\frac{4}{5}$ D. $\frac{1}{4}$ E. $\frac{3}{15}$

12. There are 30 students in a school selected for a sports competition. 17 of these students can play soccer and 18 of these students can play basketball. How many students can play both soccer and basketball?

A. 3   B.5   C. 7   D. 9   E. 11

13. There are 15 ducks. 5 of the ducks lay an egg every day. 5 of the ducks lay an egg every second day. 3 of the ducks lay an egg every third day. 2 of the ducks lay an egg every fourth day. How many eggs do the 15 ducks lay in a period of 12 days?

A. 108   B. 99   C. 80   D. 75   E. 60

14. The FIFA World Cup is held once every four years, except in 1942 and 1948 because of World War. United States hosted the 15th FIFA World Cup in 1994. When was the first FIFA World Cup held?

A. 1922   B. 1926   C. 1930   D. 1934   E. 1938

15. Darwin knows that $1111 \times 1111 = 1234321$. What is the product of 1111×2222?

A. 3456543   B. 2345432   C. 2234322   D. 2468642   E. 4321234

16. Damian has 526254 points in his game. He decided to give Nolan 193500 points so that both of them will be equal in the amount of points. How many points does Nolan have before Damian started giving him more points?

A. 115789   B. 120584   C. 125182   D. 139254   E. 141232

17. A particular month has 5 Fridays. The first and the last day of the month are not Fridays. What day is the last day of the month?

A.Wednesday   B. Thursday   C. Friday   D. Saturday   E. Sunday

18. A rectangle has the width of 3 meters. The length of the rectangle is 3 meters more than two times its width. What is the area of the rectangle?

A. 16   B. 27   C. 10   D. 9   E. 6

19. A rectangle increase 1.6 times in perimeter when its length is doubled while its width remains the same. If the length remains the same and the width is doubled, how many times will the rectangle's perimeter increase?

   A. 1.2   B. 1.3   C. 1.4   D. 1.5   E. 1.6

20. Which of the following numbers is divisible by 2, 3, and 5?

   A. 132   B. 150   C. 155   D. 160   E. 175

21. If the four-digit number 37N5 is divisible by 35, find N.

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

22. Alice multiplies a number to 2002 but she forgets two numbers "0" in 2002, so the result decreases by 3960 units. What is the number that Alice multiplies to 2002?

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

23. Christopher painted the 9 squares with the colors black, white and grey as shown. At least how many squares does he need to repaint so that no two squares with a common side have the same color?
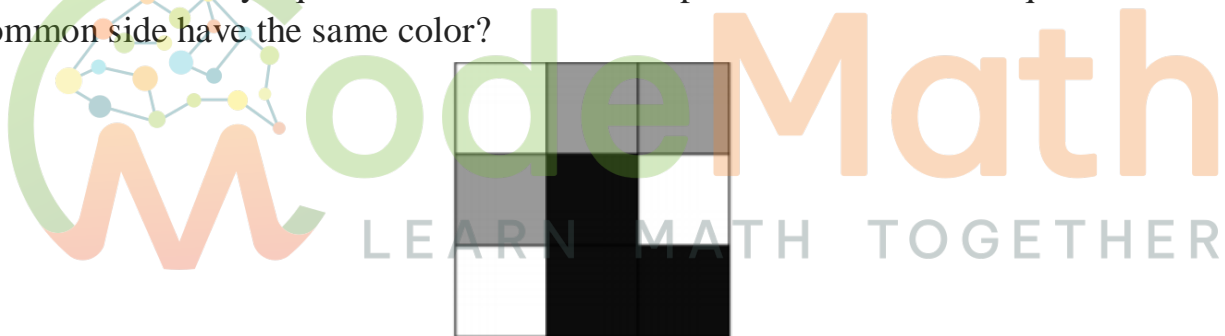
   A. 2   B. 3   C. 4   D. 5   E. 6

24. There are 150 students participating in a Language Celebration. 60 of these students can speak English, 70 of these students can speak Vietnamese, and 80 of these students can speak Spanish. There are 20 students who can speak both Vietnamese and Spanish, 20 students who can speak both English and Vietnamese, and 30 students who can speak both English and Spanish. How many of them can speak all three of the languages (English, Vietnamese, and Spanish)?

   A. 5   B. 10   C. 15   D. 20   E. 25

25. Find the sum of the terms in the 25th pair of brackets:

$$(1,2,3), (4,5,6), (7,8,9), (10,11,12), \ldots$$

26. There are 2 pipes pumping water in a tank. The first pipe takes 6 hours to fill the tank while the second takes 9 hours. If we open 2 pipes at the same time, how long will it take to fill the tank?

27. ABCD is a trapezoid. M is the mid-point of BC; E is the mid-point of AD. AM cuts BE at K; MD cuts CE at N. What is the ratio of area of trapezoid AMCE and trapezoid ABCD?
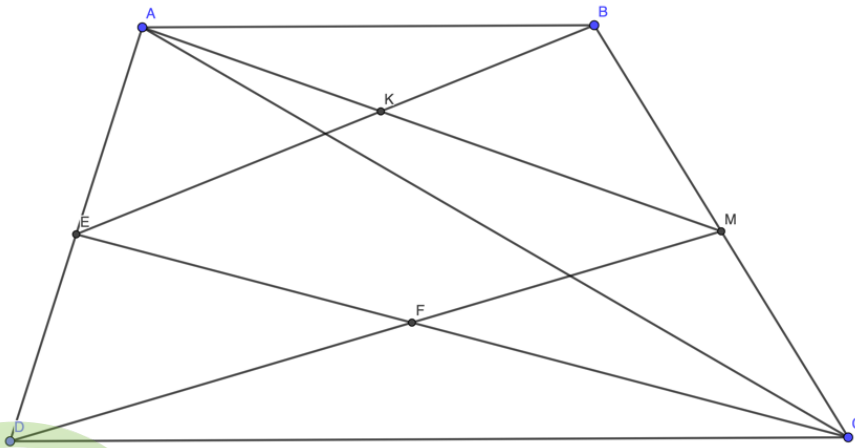
28. A lion is behind one of the three doors. A sentence is written on each door but only one of the three sentences is true. Door 1: The lion is not behind this door. Door 2: The lion is behind this door. Door 3: The sum of two and three is five. Which door is the lion behind?

29. Andy has a 256 page-long book. He numbered each page of the book from 1 to 256. How many digits will he have to use?

30. Two girls, Eva and Olga and three boys, Adam, Isaac and Urban play with a ball. When a girl has the ball, she throws it to the other girl or to a boy. When a boy has the ball, he throws it to another boy but never to the boy from whom he just received it. Eva starts by throwing the ball to Adam. Who will make the fifth throw?