

# Kangaroo.Study

## GEP MOCK

### EXAMINATION 2022

Subject: Maths

Total Duration: 1 hour 50 minutes

Name: \_\_\_\_\_

#### **INSTRUCTIONS TO PUPILS**

- 1. Do not turn over this page until you are told to do so.**
- 2. Follow all instructions carefully.**
- 3. Q1-Q25: choose the correct answer and write its corresponding letter in the space provided.**
- 4. Q26-Q50: write your answer in the space provided.**

1. There are 21 red and green coloured lights hanging on the school gate. If a red light is hung every 30 decimeter and a green light is hung between 2 adjacent red lights, how wide is the school gate?

- A. 300                  B. 330                  C. 270                  D. 360                  E. 240

Answer: \_\_\_\_\_

2. A pole is installed every 40 metres from city A to city B. If you count the poles at both ends, there are 51 poles. Now, a pole is installed every 20 metres. How many more poles are needed?

- A. 48                  B.49                  C.50                  D.51                  E. 52

Answer: \_\_\_\_\_

3. Alex and Ben have a total of 248 sweets. Alex has three times as many sweets as Ben and 8 more sweets, how many sweets does Ben have?

- A. 60                  B. 68                  C. 180                  D. 188                  E. 52

Answer: \_\_\_\_\_

4. Tom and Jerry each have a number of glass balls . Tom says to Jerry: "If I give you two, we will have the same number of glass balls . " Jerry says: "If I give you two, you will have three times as many glass balls as I have." What is the total number of glass balls for Tom and Jerry?

- A. 8                  B. 12                  C. 4                  D.16                  E.20

Answer: \_\_\_\_\_

5. The greening team planted 210 trees in 4 days and has 420 more to plant. At this rate of work, how many days does it take to complete the task from start to finish?

- A.10                  B.9                  C.6                  D. 8                  E. 12

Answer: \_\_\_\_\_

6. The monkeys are picking peaches. At the beginning, the 16 little monkeys picked 640 peaches in 2 hours. If they are required to continue picking 1200 peaches in 3 hours, how many more little monkeys should come together to pick peaches?

- A. 20                      B. 4                      C. 16                      D. 36                      E. 24

Answer: \_\_\_\_\_

7. When Cindy was doing an addition problem, he regarded the 9 in the units place as 6 and the 6 in the tens place as 9, and the result was 174. So, what should be the correct result?

- A. 147                      B. 201                      C. 174                      D. 171                      E. 204

Answer: \_\_\_\_\_

8. There was a batch of grain in the warehouse, and half and 18 tons of all the grain was shipped out on the first day. The next day, half of the remaining grain and 5 tons more were shipped out. At this time, there were still 30 tons of grain left in the warehouse that had not been shipped. How many tons of grain did the warehouse have?

- A. 166                      B. 156                      C. 176                      D. 64                      E. 54

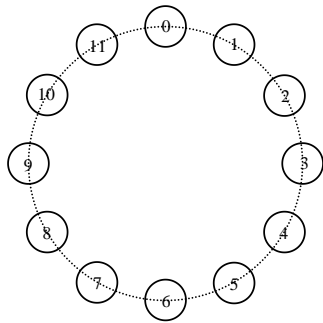
Answer: \_\_\_\_\_

9. 45 students took the test. There are 10 people who got full marks in mathematics, 3 people who got full marks in both mathematics and Chinese, and 29 people who did not get full marks in both subjects. How many people got full marks in Chinese?

- A. 11                      B. 13                      C. 16                      D. 7                      E. 9

Answer: \_\_\_\_\_

10. As shown in the figure, the frog can jump from one circle to the adjacent circle with each step. Now, a frog has jumped 1991 steps clockwise from the circle marked with the number 0 and landed in a circle. Another frog also jumped from the circle marked with the number 0, but it jumped 1949 steps in a counterclockwise direction and landed in the other circle. Question: What is the product of the numbers in the two circles?



- A. 0                      B. 66                      C. 6                      D. 55                      E. 77

Answer: \_\_\_\_\_

11. Teacher Wang buys violins. If he buys 7 violins, he will be short of 110 s\$. If he buys 5 violins, he still has 30 s\$ left. How much is a violin?

- A. 70                      B. 80                      C. 90                      D. 60                      E. 100

Answer: \_\_\_\_\_

12. Alex puts some chocolates in one of two types of boxes, large and small. If each small box contains 5 chocolates, there are 10 left. If each large box contains 8 chocolates, two chocolates are short of. Given that there are 3 more small boxes than large boxes, how many pieces of chocolate are there in total?

- A. 60                      B. 70                      C. 80                      D. 90                      E. 75

Answer: \_\_\_\_\_

13. There are 45 chickens and rabbits in the same cage. Each chicken has 2 legs, each rabbit has 4 legs, and there are 100 legs in the cage. Q: How many chickens are in the cage?

- A. 35                  B.40                  C. 36                  D.42                  E.38

Answer: \_\_\_\_\_

14. There are 100 chickens and rabbits in the same cage, and the number of legs of the rabbits is 28 more than the number of legs of the chickens. How many chickens there are?

- A. 56                  B. 58                  C. 60                  D. 62                  E. 64

Answer: \_\_\_\_\_

15. Arrange the odd numbers greater than 100 in ascending order. What is the 21st one?

- A. 137                  B. 139                  C. 141                  D. 143                  E.145

Answer: \_\_\_\_\_

16. A queue can be arranged in the order of 2, 4, 6, and 8 people in each row until there are 100 people in a row. How many people are there in this queue?

- A. 5050                  B. 5000                  C. 2500                  D. 3000                  E. 2550

Answer: \_\_\_\_\_

17. If  $A*B$  represents  $(A+3B)\times(A+B)$ , find the value of  $5*7$ .

- A. 264      B. 312      C. 144      D. 160      E. 135

Answer: \_\_\_\_\_

18. If  $a\Delta b = (a+1)\div b$ , find the value of  $6\Delta(3\Delta 4)$ .

- A. 1      B. 6      C. 5      D. 7      E. 8

Answer: \_\_\_\_\_

19. Six years ago, the father was five times the age of the son. The sum of the ages of father and son this year is 78 years old. How old is your father?

- A. 61      B. 62      C. 63      D. 60      E. 58

Answer: \_\_\_\_\_

20. Ben is 7 years old and his mother is 35 years old. When Ben is how many years old, his mother will be exactly 3 times as old as Ben?

- A. 28      B. 14      C. 21      D. 24      E. 35

Answer: \_\_\_\_\_

21. The water in a water tank is  $\frac{5}{6}$  of the capacity. After 200 liters are used, the remaining water is  $\frac{3}{4}$  of the capacity. What is the volume of this water tank in liters?

- A. 2400      B. 1200      C. 800      D. 200      E. 1600

Answer: \_\_\_\_\_

22. Tom reads a storybook and reads 20 pages a day. After 5 days, he still has  $\frac{1}{5}$  of the whole book left unread. How many pages does this storybook have?

- A. 100      B. 120      C. 125      D. 225      E. 150

Answer: \_\_\_\_\_

23. Some coins are all 20 cents or 50 cents, and these coins have a total of 10 s\$. How many different situations could there be?

- A. 8      B. 9      C. 10      D. 11      E. 12

Answer: \_\_\_\_\_

24. How many numbers without the same digits can be formed from the numbers 1, 2, and 3?

- A. 6      B. 9      C. 15      D. 12      E. 27

Answer: \_\_\_\_\_

25. Among a group of children, 12 like apples, 21 like bananas, and 8 like both fruits. There is 1 person who does not like to eat both kinds of fruits. There are \_\_\_\_\_ children in total?

Answer: \_\_\_\_\_

26.  $\frac{1}{4} + \frac{1}{8} + \frac{1}{16} =$  \_\_\_\_\_.

Answer: \_\_\_\_\_

27.  $\frac{1}{20} + \frac{1}{5} - \frac{1}{4} =$  \_\_\_\_\_.

Answer: \_\_\_\_\_

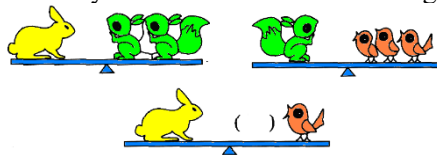
28.  $1348 - 234 - 76 + 2234 - 48 - 24 =$  \_\_\_\_\_.

Answer: \_\_\_\_\_

29.  $1847 - 1936 + 536 - 154 - 46 =$  \_\_\_\_\_.

Answer: \_\_\_\_\_

30. Look at the picture below, how many birds have to stand on the right side to balance. \_\_\_\_\_



Answer: \_\_\_\_\_

31. What number does each of the flowers below represent?

$$\begin{aligned} \text{blue flower} + \text{red flower} &= 12 \\ \text{red flower} &= \text{blue flower} + \text{blue flower} + \text{blue flower} \\ \text{red flower} &= ( \quad ) \\ \text{blue flower} &= ( \quad ) \end{aligned}$$

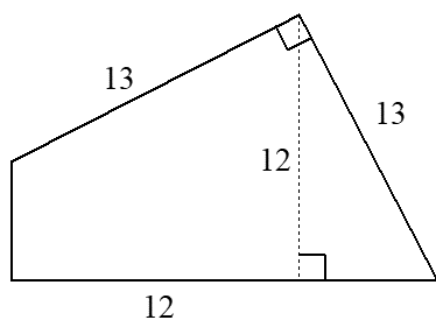
Answer: \_\_\_\_\_

32. 249 flowers are arranged in turn in the order of 5 red flowers, 9 yellow flowers, and 13 green flowers. What color is the last flower? \_\_\_\_\_.

Answer: \_\_\_\_\_

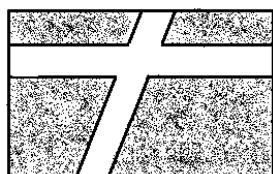


33. The area of the quadrilateral shown in the figure is \_\_\_\_\_.



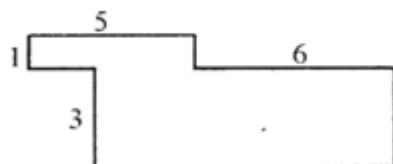
Answer: \_\_\_\_\_

34. The picture is a rectangle of grass, the length of the rectangle is 16, and the width is 10. There are two roads in the grass, one is a rectangle and the other is a parallelogram, both of which have a width of 2. The area of the grass part (shaded part) is \_\_\_\_\_.



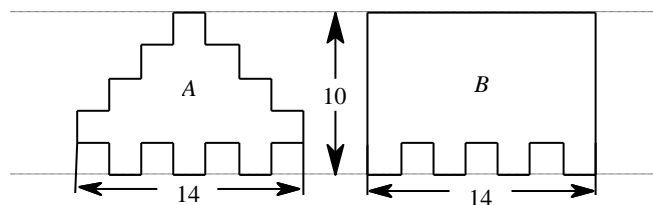
Answer: \_\_\_\_\_

35. The numbers marked in the figure below represent the length of each side in centimeters. Its perimeter is \_\_\_\_\_ cm.



Answer: \_\_\_\_\_

36. In the following two figures, the larger perimeter is \_\_\_\_\_.



Answer: \_\_\_\_\_

37. If  $\overline{abcd} + \overline{abc} + \overline{ab} + a = 1370$ ,  $\overline{abcd} =$  \_\_\_\_\_.

Answer: \_\_\_\_\_

38. Swap the tens and units digit of a two-digit number to get a new two-digit number. If the difference between the original two-digit number and the new two-digit number is 45. The largest of these two-digit numbers is \_\_\_\_\_.

Answer:\_\_\_\_\_

39.  $A = 1 + 2 + 3 + \cdots + 1993$ , Is  $A$  odd or even number? \_\_\_\_\_.

Answer:\_\_\_\_\_

40.  $A = 1 + 2 \times 3 + 4 \times 5 + 6 \times 7 + \cdots + 98 \times 99$ , Is  $A$  odd or even number? \_\_\_\_\_.

Answer:\_\_\_\_\_

41. Wang, Zhang and Li are a worker, a farmer and a teacher. All that is known is that Li is older than the teacher, Wang is a different age from the farmer, and the farmer is younger than Zhang. The worker is \_\_\_\_\_.

Answer:\_\_\_\_\_

42. A, B, C and D are comparing their heights . A says: "I'm the tallest . " B said, "I'm not the shortest . " C said, "I'm shorter than A, but there are others who are shorter than me . " D says, "I'm the shortest . " The actual measurements show that only one person is wrong . Please rank them in order of height from tallest to shortest: \_\_\_\_\_

Answer:\_\_\_\_\_

43. The school had a table tennis tryout where each player had to play one game against all the other players. 36 games were played and there were \_\_\_\_\_ participants in the tryout.

Answer:\_\_\_\_\_

44. Each symbol represents a number.  $\square + \bigcirc + \triangle + \star = \underline{\hspace{2cm}}$ .

$$\begin{array}{r}
 \triangle \quad \square \quad \square \quad \bigcirc \\
 + \quad \bigcirc \quad \square \quad \square \quad \triangle \\
 \hline
 \square \quad \square \quad \star \quad \star
 \end{array}$$

Answer:           

45. Fill in the numbers 1~9, The smallest value of a four-digit number is           .

$$\begin{array}{r}
 1 \quad \square \quad \square \quad \square \\
 + \quad \square \quad \square \quad \square \\
 \hline
 \square \quad \square \quad \square \quad \square \\
 \hline
 2 \quad 0 \quad 0 \quad 8
 \end{array}$$

Answer:           

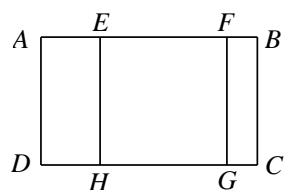
46. Two people, A and B, walk towards each other at a speed of 6 kilometers per hour and 4 kilometers per hour from two places that are 30 kilometers apart. When the distance between them is 10 kilometers, how many hours do they walk?           .

Answer:           

47. Two cars A and B leave at the same time from C and D in the opposite direction. 2 hours after departure, the two cars are 141 kilometers apart; 5 hours after departure, the two cars meet. , How many kilometers are the two places apart?           .

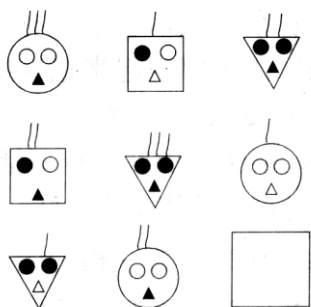
Answer:

48. As shown in the figure, in rectangle  $ABCD$ ,  $EFGH$  is a square. Given that  $AF = 10\text{cm}$ ,  $HC = 7\text{cm}$ . The perimeter of the rectangle  $ABCD$  is \_\_\_\_\_.



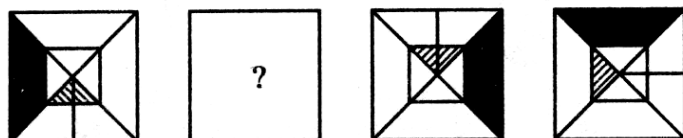
Answer: \_\_\_\_\_

49. What should be the pattern in the blank space?



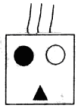
Answer: \_\_\_\_\_

50. What should be the pattern in the blank space?



Answer: \_\_\_\_\_

- 1-5: ACADE  
6-10: BACEE  
11-15: ABBDC  
16-20: EBDAB  
21-24: ACDC  
25. 26  
26.  $\frac{7}{16}$   
27. 0  
28. 3200  
29. 247  
30. 6  
31. 3、9  
32. yellow  
33. 144  
34. 112  
35. 30  
36. B  
37. 1234  
38. 94  
39. odd  
40. odd  
41. Zhang  
42. BACD  
43. 9  
44. 25  
45. 1125  
46. 2or4  
47. 235  
48. 34  
49.



50.

