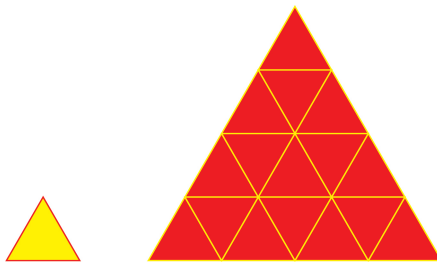Renert Rabbit

Instructions:

1. Do not open this booklet until you are told by your teacher to begin.

2. Materials: pencil, paper — no other materials. NO calculators!

3. You will have exactly **50 minutes** to work on the contest.

4. Parts A and B of this contest are multiple choice. Each of the questions in these parts is followed by five possible answers marked A, B, C, D, and E. Only one of these is correct. After making your choice, fill in the appropriate circle on the response form.

5. The correct answer to each question in Part C is an integer from 0 to 99, inclusive. Fill in your number using the appropriate circles on the response form. A one-digit answer (such as "4") must be coded with a leading zero ("04").

6. This form has 9 questions in Part A, 9 questions in Part B, and 5 questions in Part C.

7. Scoring:

   - Each correct answer is worth:
     - 4 points in Part A,
     - 5 points in Part B,
     - 6 points in Part C.
   - Each unanswered question is worth 2 points.
   - Incorrect answers are worth 0 points.

Part A (4 points each)

1. The graph shows the number of carrots Renert Rabbit ate each day of the week. What was the total number of carrots he ate?

(A) 5   (B) 10   (C) 12   (D) 28   (E) 60

2. Which of the following equations is **not** correct?

    (A) $6 + 3 - 10 \div 2 = 4$

    (B) $3 + 2 \times 2 - (5 + 1) = 1$

    (C) $21 \div 7 + 2 \times 3 = 15$

    (D) $3 \times 2 \div 2 + 0 = 3$

    (E) $(2 + 20 \div 5) + 3 \times 4 = 18$

3. Of the following 5 numbers, which is the **2nd** largest?

(A) 2.01   (B) 2.3   (C) 2.09   (D) 2.27   (E) 1.980

4. At which of the following times do the hands of a clock make a right angle?

(A) 12:00   (B) 12:30   (C) 3:00   (D) 5:35   (E) 10:10

5. Every time Terrance plays a game, he wins Renert Rabbit (RR) tokens that he can exchange for money or a toy. 5 RR tokens can be exchanged for $2. Terrance exchanged all the tokens he won for a toy that cost $12 and still received $0.80 in change. How many tokens did Terrance win in total?

(A) 28   (B) 30   (C) 32   (D) 38   (E) 62

6. Kellan has 28 candies, Siddhant has 9 more candies than Kellan, and Andrey has 3 more than twice the number of candies as Kellan and Siddhant combined. How many candies does Andrey have?

(A)   68   (B)   77   (C)   80   (D)   130   (E)   133

7. The red triangle is made up of 16 copies of the yellow triangle. If the yellow triangle is equilateral and has a perimeter of 24, what is the perimeter of the larger triangle?

(A) 48   (B) 72   (C) 96   (D) 128   (E) 384

8. A square and a rectangle have the same area. The side length of the square is 6 cm and the width of the rectangle is 8 cm. What is the length of the rectangle?

(A) 4 cm   (B) 4.5 cm   (C) 6 cm   (D) 6.5 cm   (E) 8 cm

9. Which option correctly shows the fractions in increasing order?

(A) $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}$

(B) $\frac{1}{4}, \frac{2}{3}, \frac{4}{8}, \frac{11}{12}$

(C) $\frac{1}{6}, \frac{4}{5}, \frac{2}{3}, \frac{9}{10}$

(D) $\frac{4}{5}, \frac{2}{3}, \frac{1}{2}, \frac{7}{8}$

(E) $\frac{1}{7}, \frac{1}{6}, \frac{2}{5}, \frac{3}{7}$

Part B (5 points each)

10. Inside a fruit basket, there are 3 kinds of fruits: apples, oranges, and pears. 8 of them are **not** apples, 5 are **not** oranges, and 7 are **not** pears. How many fruits are there in the basket?
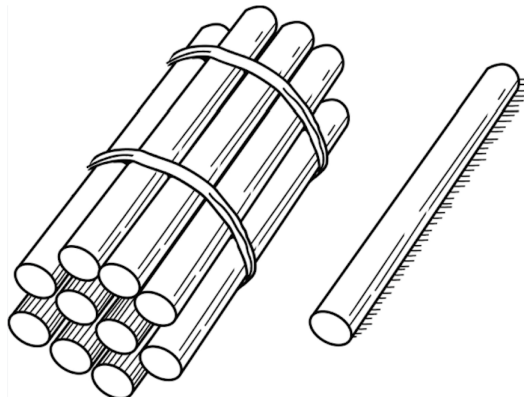

(A) 15　　　　(B) 10　　　　(C) 20　　　　(D) 18　　　　(E) 12

11. Connor and Hugo started walking from the same point. Connor walked 2 km north, 3 km west, 1 km north, and finally 5 km east. Hugo walked 2 km south, 4 km east, 6 km north, and finally 2 km west. In which direction must Hugo walk another 1 km in order to meet Connor?

(A) West　　　　(B) North　　　　(C) South　　　　(D) East　　　　(E) It is not possible

12. Aarya and Stephenie had some money. If Stephenie gave Aarya $30 they would have the same amount of money. If Aarya gave Stephanie $30 then Stephanie would have 7 times the amount of money that Aarya would have. How much money does Aarya have?

(A) 35　　　　(B) 45　　　　(C) 50　　　　(D) 55　　　　(E) 60

13. Renert Rabbit was born on January 1st, 1987. All digits of the year are unique because no digits are repeated. How old will Renert Rabbit be the next time all digits of the year are unique?

(A) 26　　　　(B) 13　　　　(C) 10　　　　(D) 28　　　　(E) 30

14. Scarlett, Laura, and Zoe share an apple pie. Scarlett takes $\frac{2}{5}$ of the pie, Laura takes $\frac{1}{4}$ of the pie, and Zoe takes the remaining 70 grams of the pie. What is the weight of the pie?

(A) 160 g　　　　(B) 200 g　　　　(C) 240 g　　　　(D) 280 g　　　　(E) 300 g

15. If today is February 4, what was the date 5 weeks ago?

    (A) December 31 (B) January 1   (C) January 7   (D) March 4   (E) March 11

16. Jaxon has 11 sticks, each 1 meter long. How many different triangles with a perimeter of 11 meters can he make without breaking any of his sticks?

    (A) 2   (B) 4   (C) 6   (D) 5   (E) 11

17. In a country called Utopia, you can trade 7 Bogs for 11 Bags, and 3 Bags for 4 Bigs. If Bilbi has 132 Bigs and trades them all for Bogs, how many Bogs will she have?

    (A) 25   (B) 28   (C) 44   (D) 63   (E) 77

18. Imaan, Jaden, Kyra, London, and Mya were having a race.

    - Mya finished before Jaden
    - One person finished between London and Mya
    - Kyra and Jaden finished next to each other
    - London finished either first or last

    Who finished in third place?

    (A) Imaan   (B) Jaden   (C) Kyra   (D) London   (E) Mya

Part C (6 points each)

19. Alyssa, Brady, Catherine, Dhiaan, and Emma, were sitting around a circular table in this order, with a bag of 153 skittles. Alyssa took 1 skittle, Brady took 2 skittles, Catherine took 3 skittles, and so on, taking an additional skittle each time. They kept doing this until the bag was empty. How many skittles did Emma get?

20. Lucas, who is 10 years old asked me: "How old are you?" I answered: "I will be 46 years old when you reach the age I am now." How old am I?

21. Two integers have a product of 2025 and a sum of 106. What is their positive difference?

22. In a group of people, $\frac{3}{10}$ are reading fantasy books, $\frac{1}{5}$ are reading adventure books, $\frac{4}{25}$ are reading comic books, $\frac{1}{10}$ are reading horror books, and the remaining 84 people are reading science fiction books. If $\frac{1}{3}$ of the people reading fantasy books switch to reading horror books and two people switch from reading horror books to reading adventure books, how many people are then reading horror books?

23. Study the pattern shown in the diagram below. In which row will 2025 appear for the first time?

Row 1 -- 1

Row 2 -- 3   5

Row 3 ------------------------------------- 7   9   11

Row 4 ------------------------------- 13   15   17   19

Row 5 ------------------------- 21   23   25   27   29