

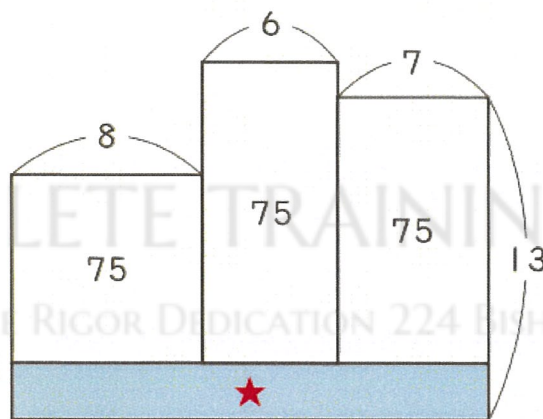
Mathlete Training Centre
WMI 2022 GRADE 4B

1. Find the units of the result of the following formula?

$$123 \times 234 + 345 \times 456 + 56 \times 67 - 7 \times 8$$

- (A) 0 (B) 2 (C) 4 (D) 8


★ = ?




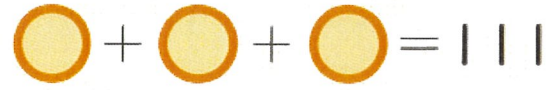
2.


- (A) 42 (B) 45 (C) 48 (D) 50

3. The old printer prints 16 pieces of paper in 3 seconds. The new printer prints 21 pieces of paper in 2 seconds. How many more pieces of paper can the new printer print than the old one does in each minute?
- (A) 280 (B) 300 (C) 310 (D) 330

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4. (A) 340 (B) 326 (C) 290 (D) 266
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5. Among the fractions below, how many of them are improper fractions?

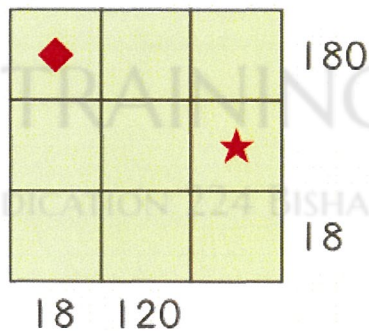
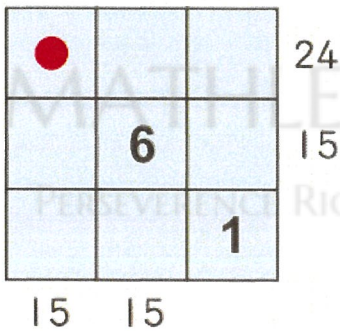
$$\frac{0}{20}, \frac{2}{25}, \frac{5}{30}, \frac{9}{35}, \frac{14}{40}, \dots, \frac{n}{100}$$

- (A) 8 (B) 6 (C) 5 (D) 4

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6. Write numbers 1-9 in each \square without repetition. Some numbers are written. The numbers which are marked outside the left picture are the sums of the numbers in a row or a column. The numbers which are marked outside the right picture are the products of the numbers in a row or a column. Find $\bullet + \blacklozenge + \star$.



- (A) 24 (B) 23 (C) 21 (D) 20

7. In the magic school, there are 40 three legged cats (each with 1 head and 3 feet) and four legged snakes (each with 1 head and 4 feet) in total. When all four legged snakes use two of their feet as hands, the number of feet of three legged cats are 6 times the number of feet of four legged snakes. Find the original number of feet in total.
- (A) 135 (B) 132 (C) 130 (D) 128

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8. Operate 2022 in the following way: Each time, the last two digits \times the last digit, and write the last two digits of the product behind this number. For example, operate 2022 once, and the result is 202244. Find the sum of the last two digits of the product when 2022 is operated for 100 times.
- (A) 7 (B) 9 (C) 11 (D) 13

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9. In an arithmetic sequence, the difference between two adjacent numbers is equal. For example, 1, 4, 7 and 10. If four integers A, B, C, D make an arithmetic sequence in ascending order, and the sums of their digits make an arithmetic sequence in descending order, find the minimum value of $A + B + C + D$.
- (A) 68 (B) 72 (C) 84 (D) 108

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10. Given a sudoku game with numbers 1-4 below. Suppose the numbers in each row, each column, and each thick frame do not repeat, and the number(s) in the corner of each square cannot be written in the square, find the sum of the numbers in the shaded squares.

4	2	34	1
23	13	14	2
1	23	12	14
4	14	3	3

1

12

12

- (A) 12 (B) 13 (C) 14 (D) 15