

1. Ed has some candies. If he gives two of his candies to his friend, he would have less than four candies. But if he buy two more candies instead he would have more than 6 candies.

How many candies that Ed has?

- A) 5
- B) 8
- C) 6
- D) 7

(Correct +3, Wrong 0, Blank 0)

2. To calculate how fast something move we divide the distance travelled by the time needed for the travel. For example, the speed of a car moving 80 meters in 4

seconds is $\frac{80}{4} = 20$ meters per second.

The speed of a train moving 240 meters in 4 seconds is ____ meter per second.

- A) 60
- B) 120
- C) 30
- D) 10

(Correct +3, Wrong 0, Blank 0)

3. Andrew grew a plant in his garden. It grew 2 cm in its first week. Each week, it grows by 10% more than it did the week before.

By how many cm does it grow in 3 weeks, including the first week?

- A) 2.40
- B) 2.42
- C) 2.22
- D) 3.6

(Correct +3, Wrong 0, Blank 0)

4. On a sunny Sunday, grandma bought for Ann three cute rabbits, two chickens, and five small fish. They grew up nicely until, unfortunately, on the fifth day, one of the animals died.

What is the probability that it was a chicken?

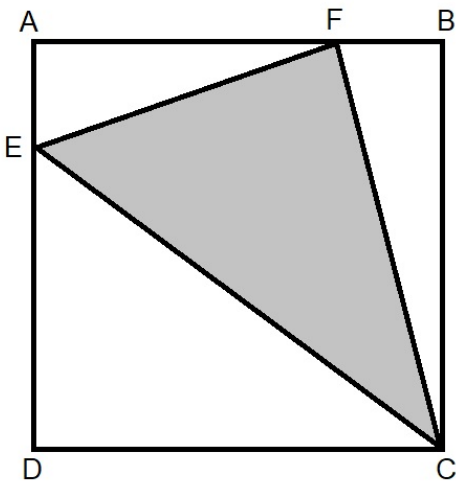
- A) $\frac{3}{5}$
- B) $\frac{3}{10}$
- C) $\frac{2}{5}$
- D) $\frac{1}{5}$

(Correct +3, Wrong 0, Blank 0)

5. In 2023, May 6 falls on a Saturday.
On which day of the week will January 1, 2024, fall?

- A) Monday
 - B) Wednesday
 - C) Thursday
 - D) Tuesday
- (Correct +3, Wrong 0, Blank 0)

6. In the diagram below, ABCD is a square, E is a point on AD, and F is a point on AB, such that $DE = 3AE$ and $AF = 3BF$.



What is the ratio of the area of square ABCD to that of triangle CEF?

- A) 32 : 15
 - B) 16 : 7
 - C) 18 : 7
 - D) 32 : 13
- (Correct +3, Wrong 0, Blank 0)

7. There are 23 picture cards in a set. Four show roses, three show trees, seven show spiders, and nine show chameleons. Sam picks a card at random.
What is the probability that it is an animal?

- A) $\frac{7}{23}$
 - B) $\frac{10}{23}$
 - C) 1
 - D) $\frac{16}{23}$
- (Correct +3, Wrong 0, Blank 0)

8. In the following equation, $c > 0$.

$$x = \frac{a - b}{c}$$

Which of the choices is, in general, false for the equation?

- A) If c increases then x decreases
 - B) If b increases then x decreases
 - C) If a increases then x increases
 - D) If a and b increases then x decreases
- (Correct +3, Wrong 0, Blank 0)

9. What is the sum of all the digits in the numbers from 1 to 20?

- A) 102
- B) 45
- C) 85
- D) 55

(Correct +3, Wrong 0, Blank 0)

10. How many possible two-digit numbers that can be divided by 5 and also by 3?

- A) 6
- B) 4
- C) 3
- D) 5

(Correct +3, Wrong 0, Blank 0)

11. Which of the following is the correct formula to find the area of a square A from its perimeter p ?

- A) $A = \frac{2P^2}{9}$
- B) $A = \frac{P^2}{16}$
- C) $A = \frac{P^2}{2}$
- D) $A = \frac{P^2}{4}$

(Correct +3, Wrong 0, Blank 0)

12. A number x is greater than 4 but less than 8. Which of the following is false about x ?

- A) $2x < 16$
- B) $4x > 32$
- C) $\frac{x}{2} > 2$

D) $3x < 90$

(Correct +3, Wrong 0, Blank 0)

13. A group of 6th graders took a math test, and their scores are recorded in the table below.

Student	Score
Alice	86
Bob	90
Cindy	99
Dave	85

Which student has the same score as the mean score of the class?

- A) Alice
- B) Bob
- C) Cindy
- D) Dave

(Correct +3, Wrong 0, Blank 0)

14. A teacher needs to choose four students to represent grade 1 in the English competition. If there are 5 students in grade 1, how many different alternatives does the teacher have?

- A) 6
- B) 1
- C) 5
- D) 4

(Correct +3, Wrong 0, Blank 0)

15. Which of the following number is the closest to the squareroot of 2023?

- A) 42
- B) 45
- C) 36
- D) 48

(Correct +3, Wrong 0, Blank 0)

16. A three-digit number \overline{ABC} is divisible by 9. If $A + C = 7$, what is B ?

- A) 1
- B) 4
- C) 2
- D) 3

(Correct +3, Wrong 0, Blank 0)

17. The average of two numbers is 24, and their difference is 4.

What is the smaller number?

- A) 22
- B) 24
- C) 28
- D) 26

(Correct +3, Wrong 0, Blank 0)

18. Jenny and her friends are planning a pizza party. They want to order enough pizzas for everyone to have two slices. Each pizza has eight slices.

If there will be 12 people at the party, how many pizzas should they order?

- A) 3
- B) 1
- C) 2
- D) 4

(Correct +3, Wrong 0, Blank 0)

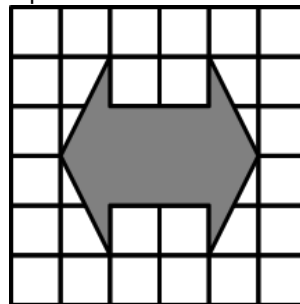
19. Since his seventh birthday, Ben has bought 8 marbles every month. On his eighth birthday, he will have 100 marbles.

How many marbles does Ben have on his seventh birthday?

- A) 24
- B) 0
- C) 12
- D) 4

(Correct +3, Wrong 0, Blank 0)

20. In the figure below, the area of one grid is 1 unit squared.



The area of the shaded double arrow is ____ units squared.

- A) 6
- B) 8
- C) 10
- D) 12

(Correct +3, Wrong 0, Blank 0)

21. Four numbers, a , b , c , and d are distinct positive integers and satisfy the inequalities $a < b < c < d < a + 5$.
If $a = 1$, the largest possible value for $a + b + c + d$ is _____. (Write your answer only in numbers.)
(Correct +4, Wrong 0, Blank 0)

22. The sum of three positive integers is 67. The difference between the largest and the smallest one is 3 and the difference between the largest and the middle one is 2.
The smallest number is _____. (Write our answer only in numbers.)
(Correct +4, Wrong 0, Blank 0)

23. In the equation below, n is a positive integer, as are a and b .

$$n = \frac{6}{a + b}$$

- How many different pairs of a and b are possible for the above condition? (Write your answer only in numbers.)
(Correct +4, Wrong 0, Blank 0)

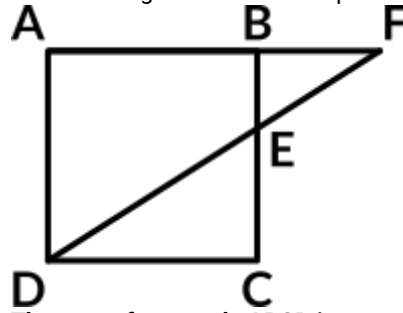
24. A boy saved 2 dollars in the first week and 5 dollars in the second week. He saved three dollars more than he did the previous week.
What was the total amount of money that the boy had in the first 12 weeks? (Write your answer only in numbers.)
(Correct +4, Wrong 0, Blank 0)

25. The following scores were earned by four of students on a math test in increasing order: x , 80, 90, 95. **If the median is equal to the mean of the scores, x is _____.** (Write your answer only in numbers.)
(Correct +4, Wrong 0, Blank 0)
26. How many possible three-digit numbers whose sum of all the digits is 4? (Write your answer only in numbers.)
(Correct +4, Wrong 0, Blank 0)
27. On Sunday, Andy has 64 dollars saved in his wallet. His mother says that during the week, if Andy finishes all his daily homework at night, she will add 25 percent of Andy's money on that day. But if Andy doesn't finish his homework that day, at night she will take 20 percent of his savings. **If from Monday to Friday Andy finished his homework except on Wednesday, his savings on Saturday morning will be _____ dollars.** (Write your answer only in numbers.)
(Correct +4, Wrong 0, Blank 0)

28. Ben can travel between cities A and B by either train, bus, or airplane. And he can travel between city B and city C by either ferry or airplane. Ben is planning to go from A to B to C, then back to B and to A. But he doesn't want to take the same mode of transportation two times in a row.
How many choices does Ben have for the trip? (Write your answer only in numbers.)
 (Correct +4, Wrong 0, Blank 0)

29. Two dice are thrown 12 times.
How many times you would expect to get the sum of 7 from the two dice? (Write only in numbers.)
 (Correct +4, Wrong 0, Blank 0)

30. The area of triangle EDC is 4 units squared, and the area of triangle BEF is 1 unit squared.



- The area of rectangle ABCD is ___ units squared.**
 (Write your answer only in numbers.)
 (Correct +4, Wrong 0, Blank 0)