

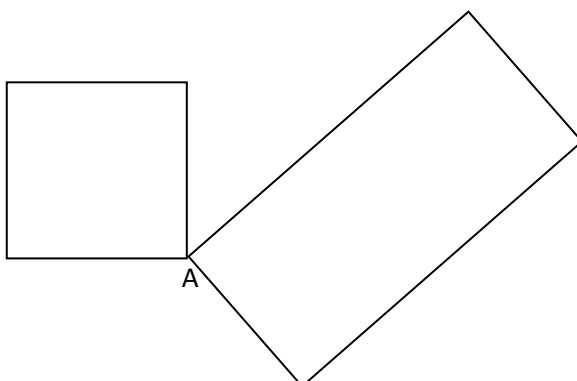
Primary [Classes V – VI]
(02/03/2021)

1. Square papers of black and white are arranged as shown



There are totally 80 squares. The number of white squares is _____ .

2. When 26 is divided by a positive integer N , the remainder is 2. The sum of all possible values of N is _____ .
3. In a garden there are two plants. One plant is 44cm tall and the other is 80 cm tall. The first plant grows 3cm in every 2 months and the second 5 cm in every 6 months. The number of months after which the two plants will have equal height is _____ .
4. If we multiply 2 by itself repeatedly four times we get $2 \times 2 \times 2 \times 2 = 16$ and it's unit digit is 6. Suppose we multiply 2 with itself 2021 times we get a big number B . What is the unit digit of B ?
5. Observe the sequence 9, 91, 19, 911, 191, 119, 9111, 1911, 1191, 1119, What is the 45th term of the sequence?
6. The positive integers a, b satisfy $23a = 32b$. Can $a + b$ be a prime number? Justify your answer.
7. There are 20 cities in a country. Each pair of cities is connected by an air route. How many air routes are there?
8. Ram checks his purse and finds that he can buy an apple and three oranges or two apples for the money he has. From the same shop, Bheem buys two apples and two oranges for Rs 16. How much should I pay when I buy three apples and two oranges from the same shop?
9. Two ants start at A and walk at the same speed, one along the square of sides 3cm and the other along the rectangle with dimensions 3cm \times 6cm as shown in the figure below. The minimum distance(in cm) any one must cover before they meet again is _____.



10. Amith, Bharath, Chithra and Deepa are friends and one among them committed a crime. They made the following statements. If only one of the statements is true, find who was guilty.

Amith: Bharath did it.

Bharath: Deepa did it.

Chithra: I did not do it.

Deepa: Bharath lied when he said I did it.