

Place Value Problems

1. When 4 was appended to a two-digit number on the left (i.e. written before the number), the number increased by 9 times. What was the number?
2. When 6 was appended to a number on the right (i.e. as the rightmost digit), it increased by 12 times. What was the number?
3. When 36 was appended to a number on the right, it increased by 103 times. What was the number?
4. A six-digit number starts with 1. When this first digit 1 is moved to the end of the number, the number becomes 3 times larger. In other words, the number $ABCDE1$ is 3 times the number $1ABCDE$, where A, B, C, D, and E are some digits.
What is the original six-digit number?
5. A four-digit number when multiplied by 9 reverses all the digits, that is $ABCD \times 9 = DCBA$. What is the number?
6. Find the smallest natural number that has the following properties: the last digit is 6, and if this last digit 6 is erased and placed in front of the remaining digits then the number gets multiplied by 4.
7. Maria wrote a number A that has more than 3 digits, starts with 1, and ends with 42. She crossed out the last two digits (42) and obtained a number B . She noticed that the number A is divisible by B . What was Maria's number A ?