

**Answer on Question #43700 – Math – Algebra**

A number has two digits, the digit in the units place is twice the digit in the tens place. If the digits be reversed the number is increased by 18. Find the number.

**Solution:**

Let the number be  $10t + u$ .

Equations:

$$\begin{cases} u = 2 \cdot t \\ 10u + t = 10t + u + 18 \end{cases}$$

Substitute for "u" and solve for "t":

$$10(2 \cdot t) + t = 10t + 2 \cdot t + 18$$

$$20t + t = 10t + 2t + 18$$

$$9t = 18$$

$$t = 2;$$

Solve for "u":

$$u = 2t = 2 \cdot 2 = 4$$

Original Number: 24

**Answer:** original number is 24.