Answer on Question #48036 – Math – Algebra

Question.

If $5 \cdot 2 = 23,\ 6 \cdot 5 = 66$ and $7 \cdot 5 = 79$ then $10 \cdot 7 =$?

Solution.

Let x be the basis of the unknown system of calculation. Then in the decimal system we have:

$$\begin{bmatrix} 10 = 2x + 3 \\ 30 = 6x + 6 \\ 35 = 7x + 9 \end{bmatrix} \Rightarrow \begin{bmatrix} x = \frac{7}{2} \\ x = 4 \\ x = \frac{26}{7} \end{bmatrix} \Rightarrow 70 = 7 \cdot x = \begin{bmatrix} \frac{49}{2} \\ 28 \\ 26 \end{bmatrix} \cdot$$

Answer. $\begin{bmatrix} 10 \cdot 7 = \frac{49}{2} \\ 10 \cdot 7 = 28 \\ 10 \cdot 7 = 26 \end{bmatrix}$