

ALGORYTMY DZIAŁAŃ PISEMNYCH

Mnożenie

Np. $137 \cdot 46 = ?$

Najpierw mnożymy jedności:

$$\begin{array}{r} 6 \cdot 7 = 42 \\ \times \quad 1 \quad 3 \quad 7 \\ \hline \end{array}$$

Diagram showing the multiplication of 7 by 6, resulting in 42. The 4 is carried over to the tens place.

Potem mnożymy dziesiątki:

$$\begin{array}{r} 6 \cdot 3 = 18 \\ 18 + 4 = 22 \\ \times \quad 1 \quad 3 \quad 7 \\ \hline \end{array}$$

Diagram showing the multiplication of 3 by 6, resulting in 18. The 18 is added to the 4 carried over from the previous step, resulting in 22. The 2 is carried over to the hundreds place.

Potem mnożymy setki:

$$\begin{array}{r} 6 \cdot 1 = 6 \\ 6 + 2 = 8 \\ \times \quad 1 \quad 3 \quad 7 \\ \hline \end{array}$$

Diagram showing the multiplication of 1 by 6, resulting in 6. The 6 is added to the 2 carried over from the previous step, resulting in 8. The final result is 822.

Najpierw mnożymy przez jedności:

$$\begin{array}{r} 6 \cdot 137 = 822 \\ \times \quad 1 \quad 3 \quad 7 \\ \hline \end{array}$$

Diagram showing the multiplication of 137 by 6, resulting in 822.

Potem mnożymy przez dziesiątki:

$$\begin{array}{r} 4 \cdot 137 = 548 \\ \times \quad 1 \quad 3 \quad 7 \\ \hline \end{array}$$

Diagram showing the multiplication of 137 by 4, resulting in 548.

Na końcu dodajemy:

$$\begin{array}{r} \times \quad 1 \quad 3 \quad 7 \\ \hline 8 \quad 2 \quad 2 \\ + 5 \quad 4 \quad 8 \\ \hline 6 \quad 3 \quad 0 \quad 2 \end{array}$$

Diagram showing the addition of the two partial products (822 and 548) to get the final result, 6302.

Dzielenie

Np. $315 : 15 = ?$

$$\begin{array}{r} 31 : 15 = 2 \text{ r. } 1 \\ 2 \cdot 15 = 30 \\ \hline 3 \quad 1 \quad 5 \\ - 3 \quad 0 \quad \\ \hline \end{array}$$

Diagram showing the division of 31 by 15, resulting in 2 with a remainder of 1. The 2 is written above the 1, and 30 is subtracted from 31, leaving 1.

$$\begin{array}{r} 15 : 15 = 1 \text{ r. } 0 \\ 1 \cdot 15 = 15 \\ \hline 3 \quad 1 \quad 5 \\ - 3 \quad 0 \quad \\ \hline 1 \quad 5 \\ - 1 \quad 5 \\ \hline 0 \end{array}$$

Diagram showing the division of 315 by 15, resulting in 21. The 2 is written above the 1, and 30 is subtracted from 31, leaving 1. The 1 is then divided by 15, resulting in 0 with a remainder of 15. The 1 is written above the 5, and 15 is subtracted from 15, leaving 0.