다항식의 나눗셈 예제 (Polynomial Division Example)







3769



3769



15 3769



$$\begin{array}{c|c}
2\\
15 \overline{\smash)3769}\end{array}$$





$$\begin{array}{r}
2\\15 \overline{\smash)3769}\\30\end{array}$$





 $\begin{array}{r}
2\\15 \overline{\smash)3769}\\30\\
\end{array}$ 



$$\begin{array}{r}
 2 \\
 \hline
 15 \overline{\smash{\big)}\,3769} \\
 \hline
 \hline
 7 \\
 \end{array}$$



$$\begin{array}{r}
 2 \\
 15 \overline{\smash{\big)}\ 3769} \\
 \hline
 30 \\
 \hline
 76
\end{array}$$

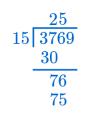






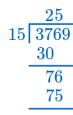






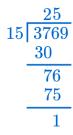






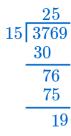






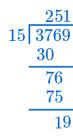














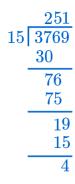


	251
15	3769
	30
	76
	<b>7</b> 5
	19
	15

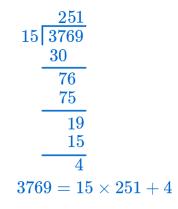


	<b>251</b>
15	3769
	30
	76
	75
	19
	15











$$2x^3 - 3x^2 + 0 \cdot x + 7$$
 $15 \overline{\smash{\big|}\ 3769} \\ \underline{30} \\ \underline{76} \\ \underline{75} \\ \underline{19} \\ \underline{15} \\ \underline{4}$ 

 $3769 = 15 \times 251 + 4$ 



$$2x^3 - 3x^2 + 0 \cdot x + 7$$

$$\begin{array}{r}
 251 \\
 15 \overline{\smash)3769} \\
 30 \\
 \hline
 76 \\
 75 \\
 \hline
 19 \\
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$



$$2x+1 \overline{)2x^3-3x^2+0\cdot x+7}$$

$$\begin{array}{r}
 251 \\
 \hline
 15 \overline{\smash)3769} \\
 \hline
 30 \\
 \hline
 76 \\
 \hline
 75 \\
 \hline
 19 \\
 \hline
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$

▶ Start

$$\frac{x^2}{2x+1 2x^3-3x^2+0 \cdot x+7}$$

$$\begin{array}{r}
 251 \\
 \hline
 15 \overline{\smash)3769} \\
 \hline
 30 \\
 \hline
 76 \\
 \hline
 75 \\
 \hline
 19 \\
 \hline
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$



$$\frac{x^2}{2x+1} \overline{ egin{array}{c} 2x^3-3x^2+0\cdot x+7 \ 2x^3+x^2 \end{array} }$$

$$\begin{array}{r}
 251 \\
 15 \overline{\smash)3769} \\
 30 \\
 \hline
 76 \\
 75 \\
 \hline
 19 \\
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$



$$x^2 \ 2x + 1 \overline{\smash{\big|}\ 2x^3 - 3x^2 + 0 \cdot x + 7 \ 2x^3 + x^2}$$

$$\begin{array}{r}
 251 \\
 15 \overline{\smash{\big)}\ 3769} \\
 30 \\
 \hline
 76 \\
 75 \\
 \hline
 19 \\
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$



$$2x + 1 \overline{\smash{\big|}\ 2x^3 - 3x^2 + 0 \cdot x + 7 \,} \\ \underline{2x^3 + x^2} \\ -4x^2$$

$$\begin{array}{r}
 251 \\
 15 \overline{\smash)3769} \\
 30 \\
 \hline
 76 \\
 75 \\
 \hline
 19 \\
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$

$$2x+1 \overline{\smash{ig|}\ \begin{array}{r} x^2 \ 2x^3-3x^2+0\cdot x+7 \ \underline{2x^3+x^2} \ -4x^2+0\cdot x \end{array}}$$

$$\begin{array}{r}
 251 \\
 15 \overline{\smash)3769} \\
 30 \\
 \hline
 76 \\
 75 \\
 \hline
 19 \\
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$

▶ Start

$$2x+1 \overline{\smash{igg|}\ 2x^3-3x^2-0\cdot x+7} \ \underline{2x^3+x^2} \ -4x^2+0\cdot x$$

$$\begin{array}{r}
 251 \\
 15 \overline{\smash)3769} \\
 30 \\
 \hline
 76 \\
 \hline
 75 \\
 \hline
 19 \\
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$

▶ Start

$$2x+1 \begin{tabular}{c|c} \hline &x^2 & -2x \ \hline &2x^3-3x^2+0\cdot x+7 \ \hline &2x^3+x^2 \ \hline &-4x^2+0\cdot x \ &-4x^2-2x \end{tabular}$$

$$\begin{array}{r}
 251 \\
 15 \overline{\smash)3769} \\
 30 \\
 \hline
 76 \\
 75 \\
 \hline
 19 \\
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$



$$2x+1 \overline{\smash{igg|}\ 2x^3-3x^2+0\cdot x+7} \ \underline{2x^3+x^2} \ -4x^2+0\cdot x \ -4x^2-2x$$

$$\begin{array}{r}
251 \\
15 \overline{\smash)3769} \\
30 \\
\hline
76 \\
75 \\
\hline
19 \\
15 \\
\hline
4 \\
3769 = 15 \times 251 + 4
\end{array}$$



$$2x+1 \overline{\smash{igg|}\ 2x^3-3x^2+0\cdot x+7} \ \underline{2x^3+x^2} \ -4x^2+0\cdot x \ \underline{-4x^2-2x} \ \underline{2x}$$

$$\begin{array}{r}
 251 \\
 15 \overline{\smash)3769} \\
 \hline
 30 \\
 \hline
 76 \\
 \hline
 75 \\
 \hline
 19 \\
 \hline
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$



$$2x+1 \overline{\smash{igg|}\ 2x^3-3x^2+0\cdot x+7} \ \underline{2x^3+x^2} \ -4x^2+0\cdot x \ \underline{-4x^2-2x} \ 2x+7 \ \overline{}$$

$$\begin{array}{r}
 251 \\
 15 \overline{\smash)3769} \\
 30 \\
 \hline
 76 \\
 75 \\
 \hline
 19 \\
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$

▶ Start ▶ End

$$x^{2}$$
  $-2x$   $+1$ 
 $2x + 1$ 
 $2x^{3} - 3x^{2} + 0 \cdot x + 7$ 
 $2x^{3} + x^{2}$ 
 $-4x^{2} + 0 \cdot x$ 
 $-4x^{2} - 2x$ 
 $2x + 7$ 

$$\begin{array}{r}
 251 \\
 15 \overline{\smash)3769} \\
 30 \\
 \hline
 76 \\
 75 \\
 \hline
 19 \\
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$

→ Start

$$\begin{array}{r}
x^2 -2x + 1 \\
2x + 1 \overline{\smash)2x^3 - 3x^2 + 0 \cdot x + 7} \\
\underline{2x^3 + x^2} \\
-4x^2 + 0 \cdot x \\
\underline{-4x^2 - 2x} \\
2x + 7 \\
2x + 1
\end{array}$$

$$\begin{array}{r}
 251 \\
 15 \overline{\smash)3769} \\
 30 \\
 \hline
 76 \\
 75 \\
 \hline
 19 \\
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$



$$x^{2}$$
  $-2x + 1$ 
 $2x + 1$ 
 $2x^{3} - 3x^{2} + 0 \cdot x + 7$ 
 $2x^{3} + x^{2}$ 
 $-4x^{2} + 0 \cdot x$ 
 $-4x^{2} - 2x$ 
 $2x + 7$ 
 $2x + 1$ 

$$\begin{array}{r}
 251 \\
 15 \overline{\smash)3769} \\
 30 \\
 \hline
 76 \\
 75 \\
 \hline
 19 \\
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$



$$\frac{15}{4}$$
$$3769 = 15 \times 251 + 4$$

$$\begin{array}{r}
x^2 -2x + 1 \\
2x + 1 \overline{\smash)2x^3 - 3x^2 + 0 \cdot x + 7} \\
\underline{2x^3 + x^2} \\
-4x^2 + 0 \cdot x \\
\underline{-4x^2 - 2x} \\
2x + 7 \\
\underline{2x + 1} \\
6
\end{array}$$

$$2x^3 - 3x^2 + 7$$
  
=  $(2x+1)(x^2 - 2x + 1) + 6$ 

$$\begin{array}{r}
 251 \\
 15 \overline{\smash)3769} \\
 30 \\
 \hline
 76 \\
 75 \\
 \hline
 19 \\
 15 \\
 \hline
 4 \\
 3769 = 15 \times 251 + 4
\end{array}$$

#### Github:

https://min7014.github.io/math20210306002.html

Click or paste URL into the URL search bar, and you can see a picture moving.