

Periodische Dezimalbrüche in normale Brüche umwandeln ...für Mitdenker!

1

$$0,2 = \frac{2}{10}$$

$$0,27 = \frac{27}{100}$$

$$0,271 = \underline{\hspace{2cm}}$$

$$0,2715 = \underline{\hspace{2cm}}$$

2

$$0,2 = \frac{2}{9}$$

$$0,27 = \frac{27}{99}$$

$$0,271 = \frac{271}{990}$$

$$0,2715 = \underline{\hspace{2cm}}$$

3

$$0,02 = \frac{2}{90}$$

$$0,027 = \frac{27}{990}$$

$$0,0271 = \frac{\hspace{1cm}}{9990}$$

$$0,02715 = \underline{\hspace{2cm}}$$

4

$$0,002 = \frac{2}{900}$$

$$0,0027 = \frac{27}{9900}$$

$$0,00271 = \frac{\hspace{1cm}}{99900}$$

$$0,002715 = \underline{\hspace{2cm}}$$

5

$$0,4\bar{2} = 0,4 + 0,0\bar{2} = \frac{4}{10} + \frac{2}{90}$$

$$0,4\bar{27} = 0,4 + 0,0\bar{27} = \frac{4}{10} + \frac{27}{990}$$

$$0,4\bar{271} = 0,4 + \underline{\hspace{1cm}} = \frac{4}{10} + \frac{\hspace{1cm}}{9990}$$

$$0,4\bar{2715} = 0,4 + \underline{\hspace{1cm}} = \frac{4}{10} + \frac{\hspace{1cm}}{\hspace{1cm}}$$

$$0,4\bar{27} = 0,4 + 0,0\bar{27} = \frac{4}{10} + \frac{27}{990} = \frac{396}{990} + \frac{27}{990} = \frac{423}{990} = \frac{423}{990} = \frac{27}{111}$$

6

$$0,46\bar{2} = 0,46 + 0,00\bar{2} = \frac{46}{100} + \frac{2}{900}$$

$$0,46\bar{27} = 0,46 + 0,00\bar{27} = \frac{46}{100} + \frac{27}{9900}$$

$$0,46\bar{271} = 0,46 + \underline{\hspace{1cm}} = \frac{46}{100} + \frac{\hspace{1cm}}{99900}$$

$$0,46\bar{2715} = 0,46 + \underline{\hspace{1cm}} = \frac{46}{100} + \frac{\hspace{1cm}}{\hspace{1cm}}$$

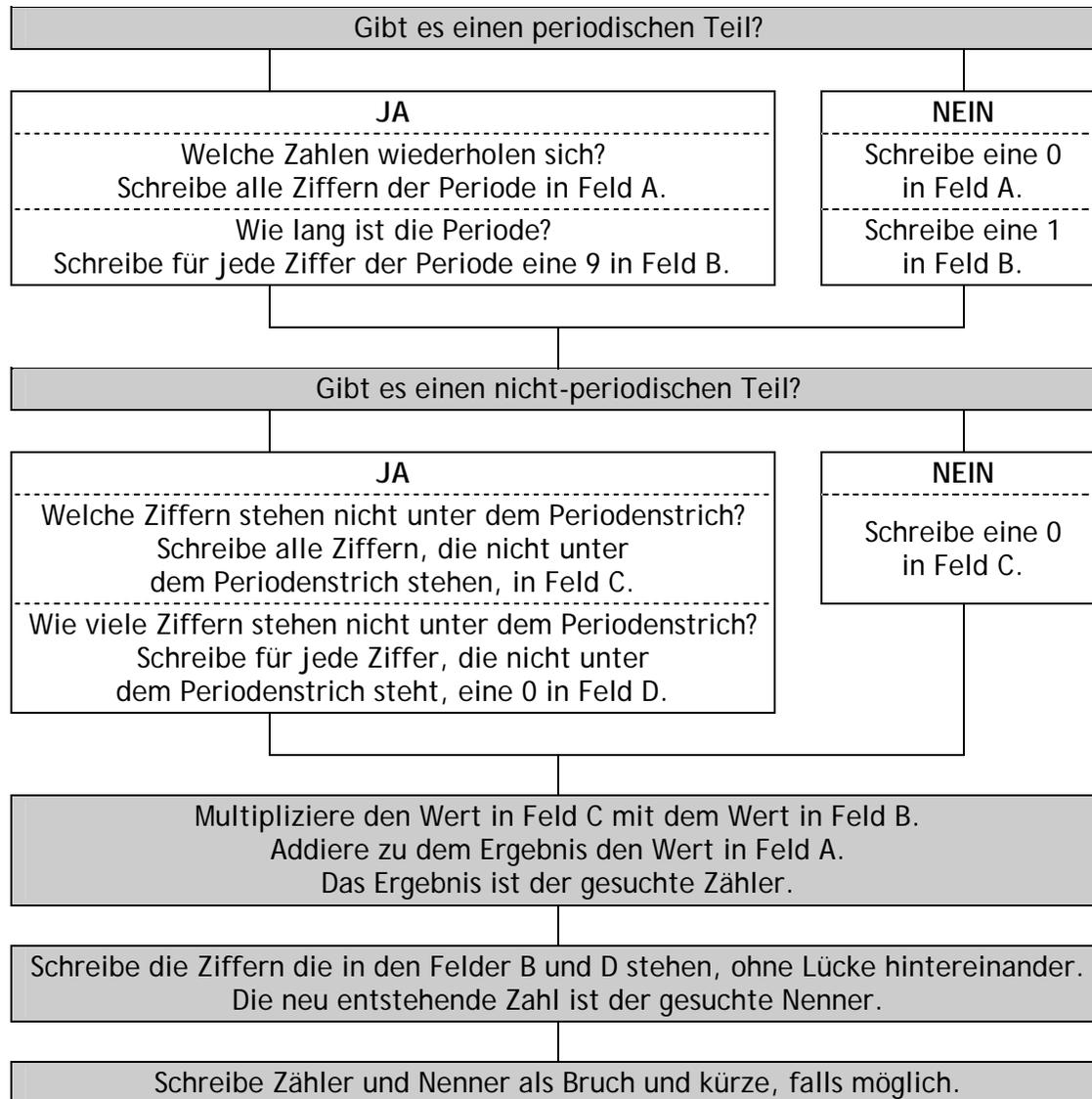
$$0,46\bar{27} = 0,46 + 0,00\bar{27} = \frac{46}{100} + \frac{27}{9900} = \frac{4554}{9900} + \frac{27}{9900} = \frac{4581}{9900} = \frac{509}{1100}$$

Aufgabe: Vervollständige alle Lücken. Addiere dann die Brüche in **5** und **6** wie in den beiden grau unterlegten Beispielen.

Vorgehen verstanden? Dann denke dir selbst periodische Dezimalbrüche aus und wandle sie in normale Brüche um!

Periodische Dezimalbrüche in normale Brüche umwandeln ...nach Rezept!

Schreibe $0,3\overline{57}$, $0,\overline{7}$ und $0,25$ als normale Brüche. Benutze dieses „Rezept“:



$$\frac{\begin{array}{|c|} \hline C \\ \hline \end{array} \cdot \begin{array}{|c|} \hline B \\ \hline \end{array} + \begin{array}{|c|} \hline A \\ \hline \end{array}}{\begin{array}{|c|c|} \hline B & D \\ \hline \end{array}}$$

Lösungen:

$$0,3\overline{57} = \frac{3 \cdot 99 + 57}{990} = \frac{354}{990} = \frac{118}{330} = \frac{59}{165}$$

$$\frac{\begin{array}{|c|} \hline C \\ \hline 3 \\ \hline \end{array} \cdot \begin{array}{|c|} \hline B \\ \hline 99 \\ \hline \end{array} + \begin{array}{|c|} \hline A \\ \hline 57 \\ \hline \end{array}}{\begin{array}{|c|c|} \hline B & D \\ \hline 99 & 0 \\ \hline \end{array}}$$

$$0,\overline{7} = \frac{0 \cdot 9 + 7}{9} = \frac{7}{9}$$

$$\frac{\begin{array}{|c|} \hline C \\ \hline 0 \\ \hline \end{array} \cdot \begin{array}{|c|} \hline B \\ \hline 9 \\ \hline \end{array} + \begin{array}{|c|} \hline A \\ \hline 7 \\ \hline \end{array}}{\begin{array}{|c|c|} \hline B & D \\ \hline 9 & \\ \hline \end{array}}$$

$$0,25 = \frac{25 \cdot 1 + 0}{100} = \frac{25}{100} = \frac{1}{4}$$

$$\frac{\begin{array}{|c|} \hline C \\ \hline 25 \\ \hline \end{array} \cdot \begin{array}{|c|} \hline B \\ \hline 1 \\ \hline \end{array} + \begin{array}{|c|} \hline A \\ \hline 0 \\ \hline \end{array}}{\begin{array}{|c|c|} \hline B & D \\ \hline 1 & 00 \\ \hline \end{array}}$$