

# Eindexamen wiskunde B1-2 vwo 2005-II

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## Periodieke rijen

17.  $u_2 = \sqrt[5]{21}$ ;  $u_3 = 3$ ;  $u_4 = 7$

Periodieke rij met periode 3

$$u_0 = u_3 = u_6 \text{ enz.}$$

$$u_{2005} = u_{2004+1} = u_1 = 7$$

18.  $u_0 = a$   
 $u_1 = b$

$$\left. \begin{array}{l} u_2 = \frac{5}{a \cdot b} = a \\ u_3 = \frac{5}{b \cdot a} = b \end{array} \right\} a = b \quad \text{en} \quad a^3 = 5 \quad \rightarrow \quad a = \sqrt[3]{5}$$

19.  $u_0 \cdot u_1 \cdot u_2 = u_3 \cdot u_4 \cdot u_5 = \text{enz} = 3 \cdot 7 \cdot \sqrt[5]{21} = 5$

$$\begin{aligned} P_{3k+1} &= u_0 \cdot u_1 \cdot u_2 \cdot u_3 \cdot u_4 \cdot u_5 \cdot \dots \cdot u_{3k-3} \cdot u_{3k-2} \cdot u_{3k-1} \cdot u_{3k} \cdot u_{3k+1} \\ &\quad \parallel \quad \quad \parallel \quad \quad \quad \quad \quad \quad \parallel \quad \quad \quad \parallel \quad \parallel \\ &\quad \quad \quad 5 \quad \cdot \quad 5 \quad \quad \cdot \quad \dots \quad \cdot \quad 5 \quad \quad \cdot \quad 3 \cdot 7 \end{aligned}$$
$$= 5^k \cdot 21 = 21 \cdot 5^k$$