



Exercícios: Matriz de Vandermonde

Calcule os determinantes:

$$1. \begin{vmatrix} 1 & 1 & 1 & 1 \\ 2 & 3 & 5 & 7 \\ 4 & 9 & 25 & 49 \\ 8 & 27 & 125 & 343 \end{vmatrix} =$$

$$2. \begin{vmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 2 & 3 & 4 & 1 & 5 & 6 \\ 2^2 & 3^2 & 4^2 & 1 & 5^2 & 6^2 \\ 2^3 & 3^3 & 4^3 & 1 & 5^3 & 6^3 \\ 2^4 & 3^4 & 4^4 & 1 & 5^4 & 6^4 \\ 2^5 & 3^5 & 4^5 & 1 & 5^5 & 6^5 \end{vmatrix} =$$

$$3. \begin{vmatrix} 1 & 1 & 1 & 1 \\ \log 7 & \log 70 & \log 700 & \log 7000 \\ (\log 7)^2 & (\log 70)^2 & (\log 700)^2 & (\log 7000)^2 \\ (\log 7)^3 & (\log 70)^3 & (\log 700)^3 & (\log 7000)^3 \end{vmatrix} =$$

$$4. \text{ Resolva a equação } \begin{vmatrix} 1 & 1 & 1 & 1 \\ 1 & 2 & x & -5 \\ 1 & 4 & x^2 & 25 \\ 1 & 8 & x^3 & -125 \end{vmatrix} = 0$$

Gabarito:

- 240
- 34 560

- 12
- $S = \{-5, 1, 2\}$