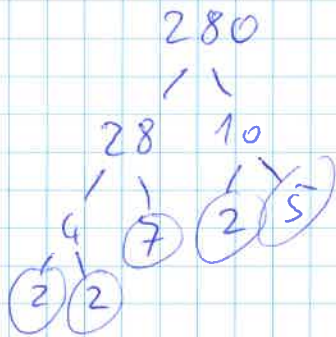


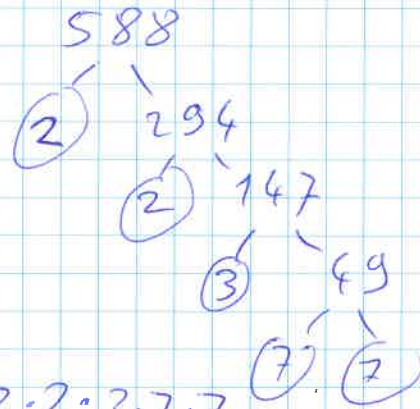
Exercice de référence : PPMC ; PGDC

Calcule le pgdc (plus grand diviseur commun) et le ppmc (plus petit multiple commun) de 280 et 588

On décompose en produits de facteurs premiers (dfp):



$$\begin{aligned} 280 &= 2 \cdot 2 \cdot 2 \cdot 5 \cdot 7 \\ &= \underline{2^3 \cdot 5 \cdot 7} \end{aligned}$$



$$\begin{aligned} 588 &= 2 \cdot 2 \cdot 3 \cdot 7 \cdot 7 \\ &= \underline{2^2 \cdot 3 \cdot 7^2} \end{aligned}$$

PGDC → On Garde les facteurs communs

$$\begin{aligned} 280 &= \textcircled{2} \cdot \textcircled{2} \cdot 2 \cdot 5 \cdot \textcircled{7} \\ 588 &= \textcircled{2} \cdot \textcircled{2} \cdot 3 \cdot \textcircled{7} \cdot 7 \end{aligned} \rightarrow \underline{\text{pgdc}(280; 588) = 2 \cdot 2 \cdot 7 = 28}$$

PPMC → On complète

$$\begin{aligned} 280 &= 2 \cdot 2 \cdot 2 \cdot 5 \cdot 7 \\ 588 &= 2 \cdot 2 \cdot 3 \cdot 7 \cdot 7 \end{aligned} \rightarrow \underline{\begin{array}{ccccccc} 2 & 2 & 2 & 5 & 7 & 3 & 7 \\ a & b & & d & c & e & \end{array}} = 5880$$
$$\underline{\text{ppmc}(280; 588) = 5880}$$