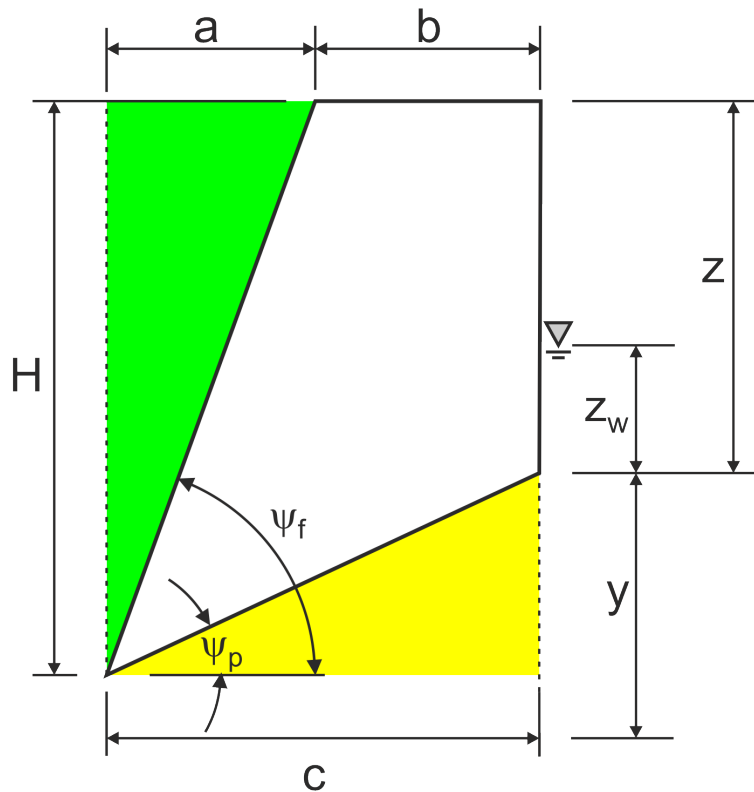


Practice exam : determination of z (Question 4)

Question 4 (25 points)

In order to solve this question, you need to determine the height z . Let us define the distances a , c and y , as shown in the following figure.



We have :

$$\begin{aligned}
 z &= H - y && \text{Yellow triangle} \\
 &= H - c \tan(\psi_p) \\
 &= H - (a + b) \tan(\psi_p) \\
 &= H - \left(\frac{H}{\tan(\psi_f)} + b \right) \tan(\psi_p) && \text{Green triangle}
 \end{aligned}$$