## Step-1

Given matrix is $A=\begin{pmatrix}2&2&0\\2&5&3\\0&3&8\end{pmatrix}$.

Now the upper left determinants are

$A_1=2,$

$A_2=\begin{vmatrix}2&2\\2&5\end{vmatrix}=6,$

$$\begin{aligned}A_3&=|A|\\&=2(40-9)-2(16)+0\\&=30\end{aligned}$$

Therefore, the upper left determinants are $\boxed{A_1=2, A_2=6 \text{ and } A_3=30}$.

## Step-2

Now we determine the pivots of $A$.

$$A=\begin{pmatrix}2&2&0\\2&5&3\\0&3&8\end{pmatrix}$$

$$\begin{aligned}&\text{Apply} R_2\to R_2-R_1\\&=\begin{pmatrix}2&2&0\\0&3&3\\0&3&8\end{pmatrix}\end{aligned}$$

$$\begin{aligned}&\text{Apply} R_3\to R_3-R_2\\&=\begin{pmatrix}2&2&0\\0&3&3\\0&0&5\end{pmatrix}\end{aligned}$$

So the pivots of $A$ are $\boxed{2,3 \text{ and } 5}$.

## Step-3

Verification,

The pivots are $\frac{A_1}{1}, \frac{A_2}{A_1}$ and $\frac{A_3}{A_2}$.

i.e. $\frac{2}{1}, \frac{6}{2}, \frac{30}{6}$

That is $2,3,5.$

Thus pivots are verified.