back substitution

$$\begin{bmatrix} 2 & 3 & -4 \\ 0 & 7/2 & 1 \\ 0 & 0 & 16/7 \end{bmatrix} \begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} 12 \\ 6 \\ -16/7 \end{pmatrix}$$

to get x:
$12 - z a_{13} - \underline{y a_{12}}$

$$z = b_3 / a_{33}$$

$$a_{22} y + a_{23} z = b_2$$

substitute z; subtract $a_{23} z$ from b_2, $(b_2 - a_{23} z)$

$$\begin{pmatrix} a_{11} & a_{12} & a_{13} \\ 0 & a_{22} & a_{23} \\ 0 & 0 & a_{33} \end{pmatrix} \begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{matrix} b_1 \\ b_2 \\ b_3 \end{matrix}$$

$i = 2$ $n-1$

for $i = n, 1$

$j = 3$

for $j > i$

$b_i' = b_i - a_{ij} b_j$

end

$b_2' = b_2 - a_{23} b_3'$

$\equiv z$

$b_i' \to \frac{b_i}{a_{ii}}$ only for $i = 3$

1 for $i = n, 1$

2 for $j > i$

3 $b_i' = b_i - a_{ij} b_j$

4 end

5 $b_i' \to \dfrac{b_i}{a_{ii}}$ only for $i = 3$

$i = 1$

$j = 2, j = 3$

First $i = n = 3$ I go directly to (5)

$$b_3' \to \frac{b_3}{a_{33}} \quad (\equiv z)$$

2nd $i = n-1 = 2$, I go to line (2)

$j = 3$, $b_2' = b_2 - a_{23} \boxed{b_3}$

but b_3 is already $b_3' \equiv z$