(5) Add R2 to R3:

R3. Q -1 -2 -1 (10 -1 1)

R2: Q 1 2 1 (0 1 2 1)

Q 0 0 0 0

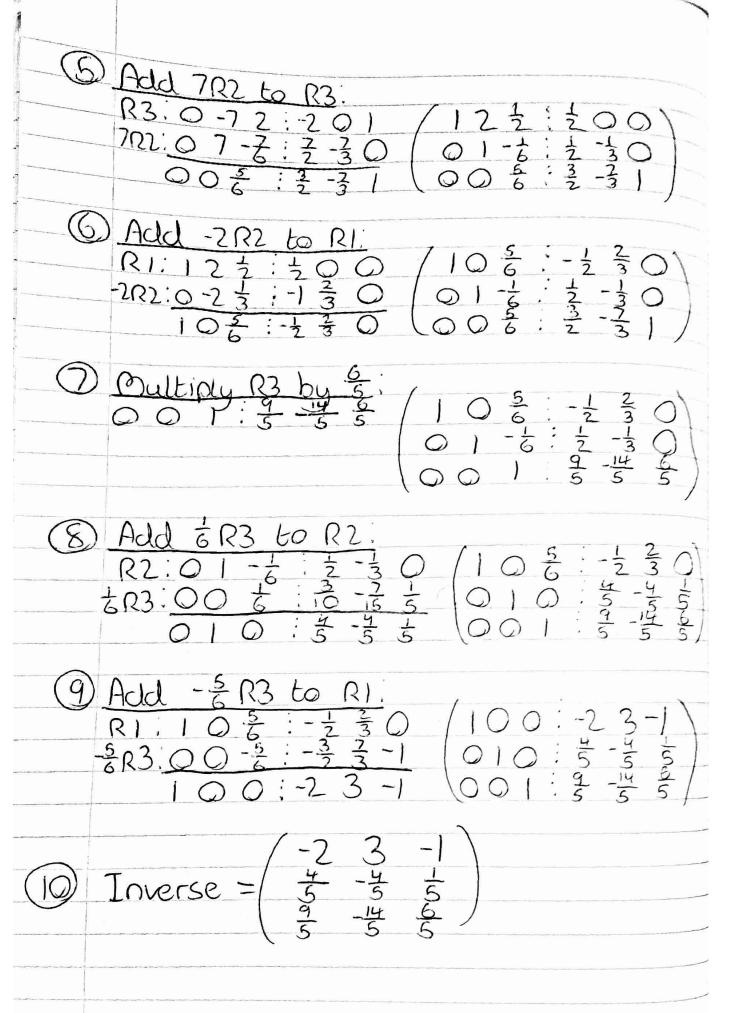
$$\begin{pmatrix} 1 & 0 & -1 & 1 \\ 0 & 1 & 2 & 1 \\ 0 & 0 & 0 & 0 \end{pmatrix}$$

$$x - z = 1$$
 $y + 2z = 1$
 $z = x - 1$
 $z = \frac{1 - 9}{2}$

$$Z = X - 1$$

$$Z = \frac{1 - 9}{2}$$

(2 4 1:100) (3 3 2:010 4 1 4:001) \R1 $\begin{pmatrix} 1 & 2 & \frac{1}{2} & \vdots & \frac{1}{2} & 0 & 0 \\ 3 & 3 & 2 & \vdots & 0 & 1 & 0 \\ 4 & 1 & 4 & \vdots & 0 & 0 & 1 \end{pmatrix}$ 3 Add -4R1 to R3: R3:414:001 -4R1:-4-8-2:-200 9 Multiply R2 by $-\frac{1}{3}$: $0 \cdot 1 - \frac{1}{6} : \frac{1}{2} - \frac{1}{3} \cdot 0 \quad (1 \cdot 2 \cdot \frac{1}{2} : \frac{1}{2} \cdot 0 \cdot 0)$ $0 \cdot 1 - \frac{1}{6} : \frac{1}{2} - \frac{1}{3} \cdot 0$ $0 \cdot 1 - \frac{1}{6} : \frac{1}{2} - \frac{1}{3} \cdot 0$ $0 \cdot 1 - \frac{1}{6} : \frac{1}{2} - \frac{1}{3} \cdot 0$



$$3 \times -9 = 5$$

 $2 \times +39 = 1$

$$\begin{pmatrix} 3 & -1 \\ 2 & 3 \end{pmatrix} = A$$

$$\det(A) = \begin{vmatrix} 3 & -1 \\ 2 & 3 \end{vmatrix} = (3)(3) - (-1)(2)$$

$$x = \begin{vmatrix} 5 & -1 \\ 1 & 3 \end{vmatrix} = \frac{16}{11}$$

$$y = \begin{vmatrix} 3 & 5 \\ 2 & 1 \end{vmatrix} = \frac{-7}{11}$$