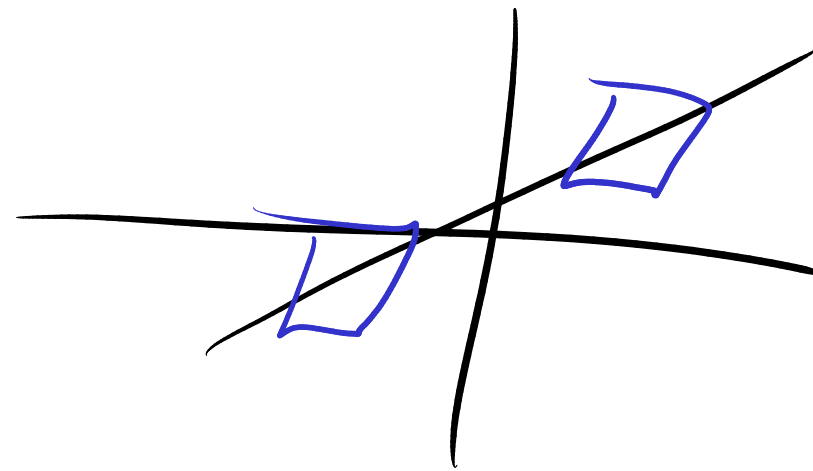


linear  $y = mx + b$



$$y = 3x^2 + 5 \quad y' = 6x$$

---

$$\begin{aligned} 3x + 5y &= 2 \\ 2x - y &= 5 \end{aligned} \Rightarrow \begin{aligned} 3x + 5(2x - 5) &= 2 \\ y &= 2x - 5 \end{aligned}$$

---

$$\begin{aligned} 13x &= 27 \\ x &= \frac{27}{13} \end{aligned} \quad \begin{aligned} \frac{54}{13} - y &= 5 \\ y &= \frac{54}{13} - 5 = \frac{11}{13} \end{aligned}$$

$$\begin{aligned} x - 3y + 4z &= -4 \\ 3x - 7y + 7z &= -8 \\ -4x + 6y - z &= 7 \end{aligned}$$

$$(3x - 3x) + (-7y + 9y) + (7z - 12z) = -8 + 12$$

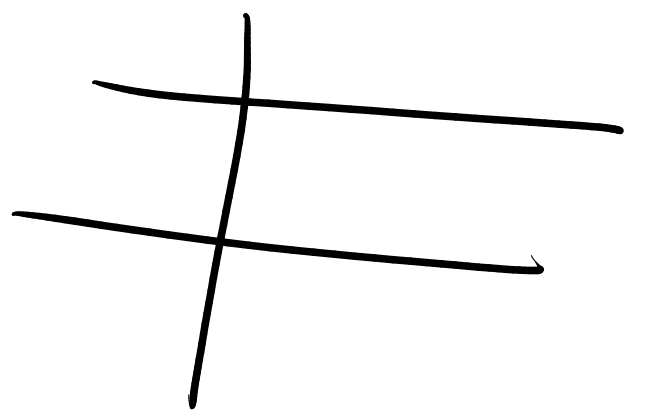
$$\{ \} = \emptyset$$

$$\left[ \begin{array}{ccc|c} 1 & -3 & 4 & -4 \\ 3 & -7 & 7 & -8 \\ -4 & 6 & -1 & 7 \end{array} \right] \rightarrow \left[ \begin{array}{ccc|c} 1 & -3 & 4 & -4 \\ 0 & 2 & -5 & 4 \\ 0 & -6 & 15 & -9 \end{array} \right]$$

$$\begin{aligned} x - 3y + 4z &= -4 \\ 2y - 5z &= 4 \\ -6y + 15z &= -9 \end{aligned}$$

$$\rightarrow \left[ \begin{array}{ccc|c} 1 & -3 & 4 & -4 \\ 0 & 2 & -5 & 4 \\ 0 & 0 & 0 & 3 \end{array} \right]$$

$$\begin{aligned} x - 3y + 4z &= -4 \\ 2y - 5z &= 4 \\ 0 &= 3 \end{aligned}$$



$$\left[ \begin{array}{ccccc|c} \hline 1 & 3 & 2 & 4 & 7 & 5 \\ \hline 0 & 1 & 4 & 2 & 9 & 8 \\ 0 & 0 & 0 & 1 & 3 & 4 \\ 0 & 0 & 0 & 0 & 1 & 2 \\ \hline \end{array} \right]$$

this is the problem

$$y + 4z + 2(-2) + 9(2) = 8$$

$$u + 3w = 4 \Rightarrow u = -2$$

$$w = 2$$

$$\left\{ \left[ \begin{array}{c} -4z - 6 \\ 2z \\ 2 \end{array} \right] \right\}$$

$$y + 4z = -6$$

$$\left\{ \begin{array}{l} x = - \\ y = 4z - 6, \\ u = -2, w = 2 \end{array} \right\}$$