

Multiply eq ③ by "3" and ④ by 2 and subtract

$$-3 = -6K_1 + 6K_2 + 3K_3$$

$$\underline{-16 = -4K_1 + 6K_2 + 8K_3}$$

$$+13 = -2K_1 - 5K_3 \rightarrow \textcircled{6}$$

Multiply eq ⑥ by 2 and Adding

$$26 = -4K_1 + 10K_3$$

$$\underline{-2 = 4K_1 + 2K_3}$$

$$24 = -8K_3$$

$$\boxed{K_3 = -3}$$

Substitute in ②

$$-8 = -K_2 + 2(-3)$$

$$-8 = -K_2 - 6$$

$$-8 + 6 = -K_2$$

$$-2 = -K_2$$

$$\boxed{K_2 = 2}$$

Substitute in ①

$$6 = 4K_1 + 2$$

$$6 - 2 = 4K_1$$

$$4 = 4K_1$$

$$\boxed{K_1 = 1}$$