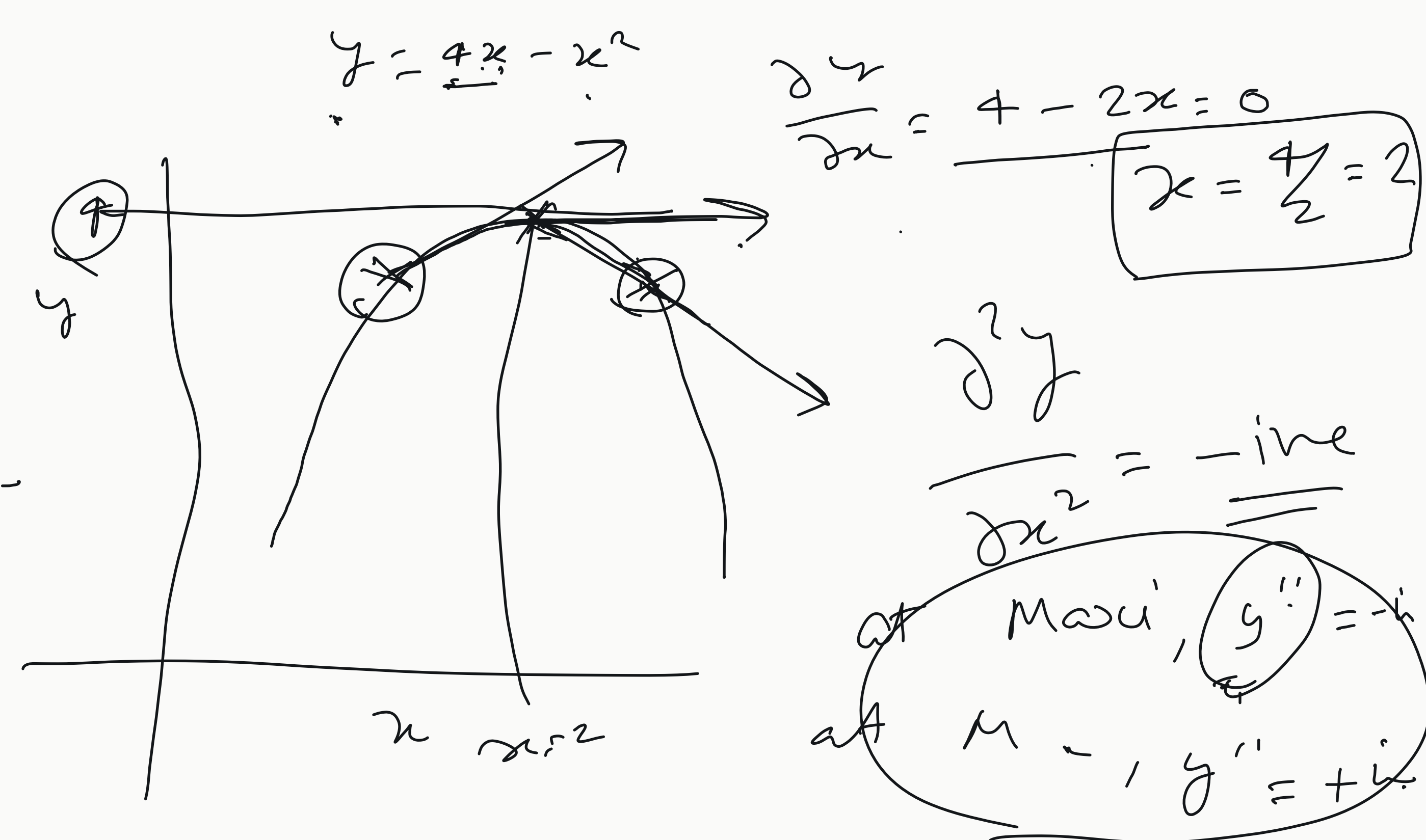


$$\frac{\partial^2 y}{\partial x^2} = +1 \checkmark$$



$$\frac{\partial^2 y}{\partial x^2} = -ive$$

at $M_{max}, y'' = -$
at $M_{min}, y'' = +$

$$y = mx + c$$

$$E = \frac{(2m+c-3)^2}{2} + \frac{(4m+c-5)^2}{2} + \frac{(6m+c-6)^2}{2}$$

$$\frac{\partial E}{\partial m} = 0 = 2(2m+c-3) + 2(4m+c-5) + 2(6m+c-6)$$

$$0 = 28m + 6c - 31 \quad (1)$$

$$\frac{\partial E}{\partial c} = 0 = 2(2m+c-3) + 2(4m+c-5) + 2(6m+c-6)$$

$$0 = 12m + 3c - 14 \quad (2) \times 2$$

$$0 = 24m + 6c - 28 \quad (3)$$

$$G = 28m + 6c - 31$$

$$-4m + 3 = 0$$

$$m = 3/4 \checkmark$$

$$12 \times \frac{3}{4} + 3c - 14 = 0$$

$$3c - 5 = 0$$

$$c = 5/3 \checkmark$$

$$y = \underline{m_1} x^2 + \underline{m_2} x + \underline{c}$$

(n) weights

Eqns = n eqns

$$O(n^3)$$

$$y = x^2, \quad \frac{\partial y}{\partial x} = 2x$$

$$y = (x+10)^2$$

$$y = 2x^2, \quad \frac{\partial y}{\partial x} = 2 + 2x$$

$$2 = x + 10, \quad \frac{\partial y}{\partial x} = 1$$

$$\frac{\partial y}{\partial x} = 2x$$

$$\frac{\partial y}{\partial x} = 2 + 2x$$

$$\frac{\partial y}{\partial x} = 1$$

$$y = (x^2 + 10)^2$$

$$y = 2x^2$$

$$2x = x^2 + 10$$

$$\frac{\partial y}{\partial x} = 2x$$

$$\frac{\partial y}{\partial x} = 2(2x+10) \times 2x$$

$$\frac{\partial y}{\partial x} = 2(3x+10) \times 3$$

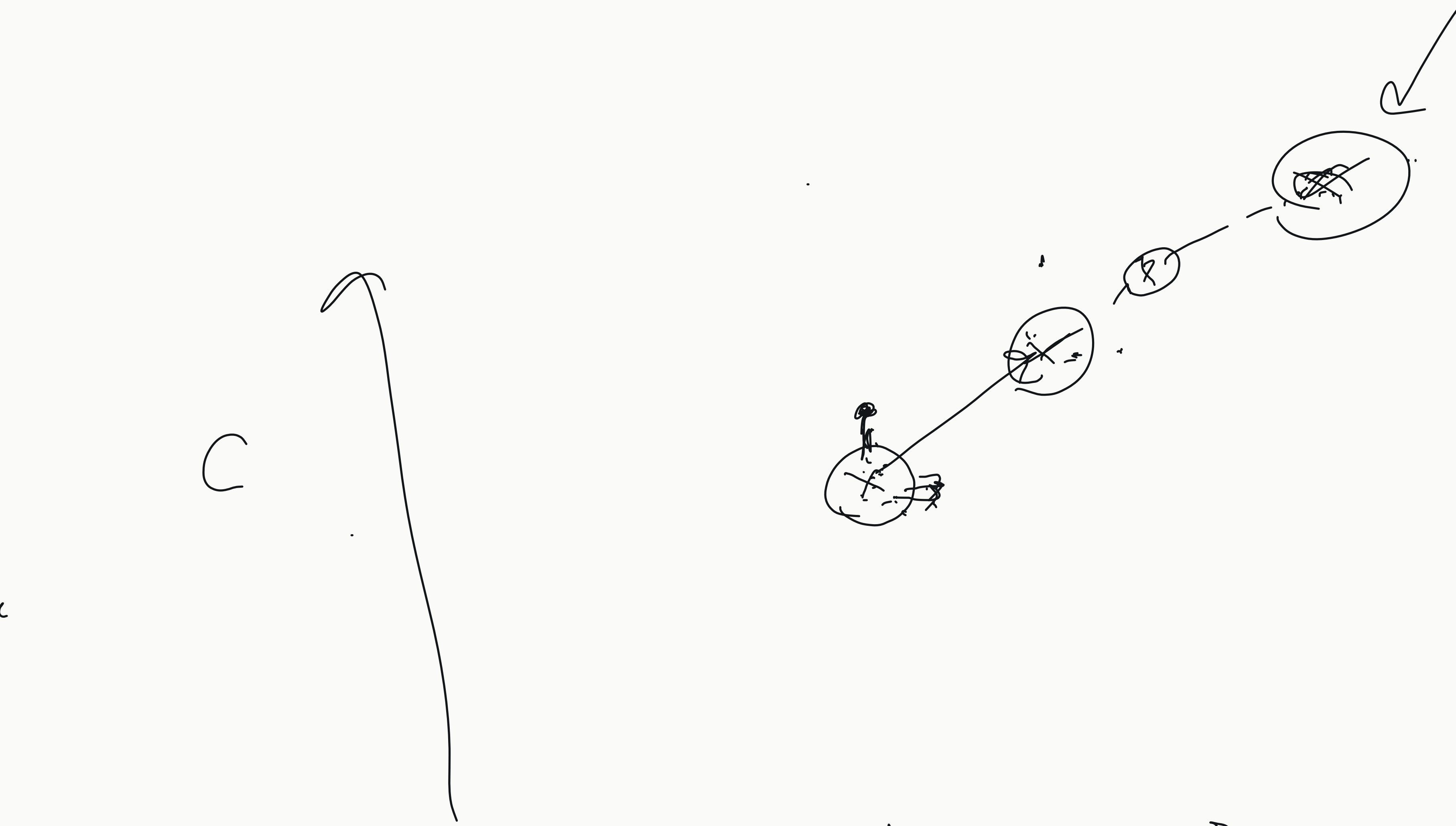
$$\frac{\partial y}{\partial x} = 2(3x+10) \times 3$$

$$\frac{\partial y}{\partial x} = 2(3x+10) \times 3$$

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$$\frac{\partial y}{\partial x} = 2(3x+10) \times 3$$

$$\frac{\partial y}{\partial x} = 2(3x+10) \times 3$$



Sum of L5

(Normal E)