MONSTRINHO 3.1

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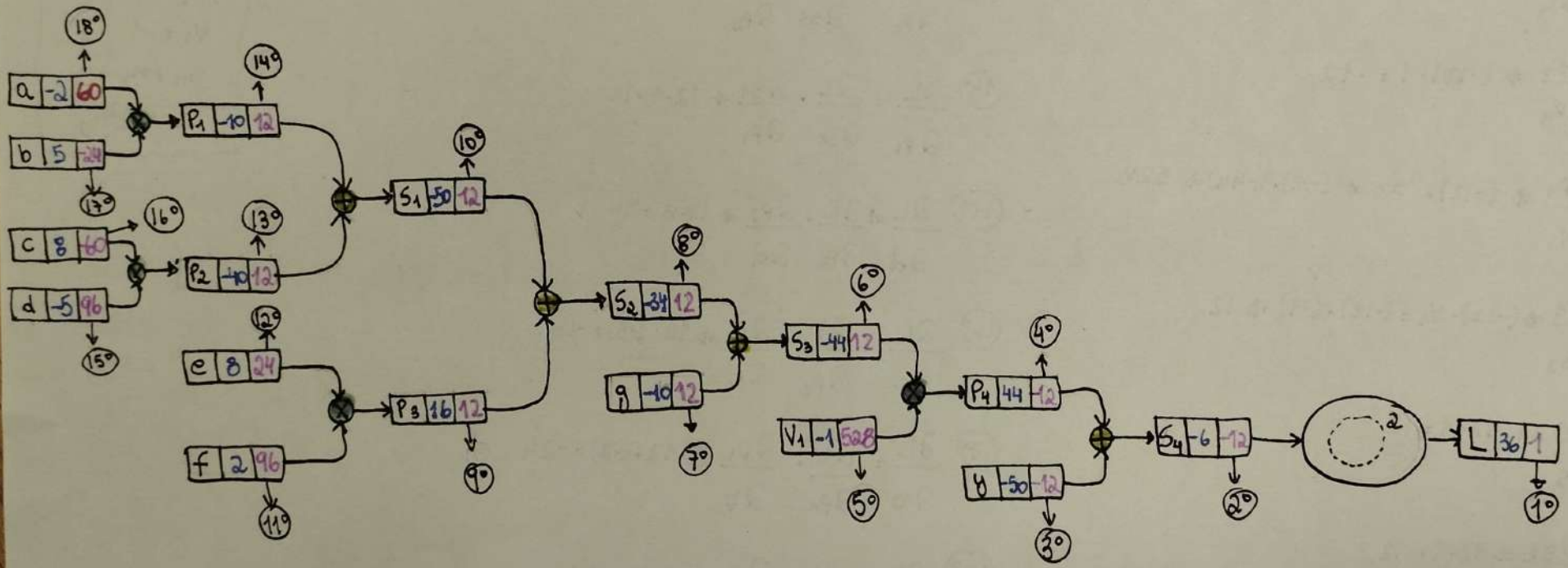
$L = (y - (a.b + c.d + e.f + g))^2$

$y = -50,\ a = -2,\ b = 5,\ c = 8,\ d = -5,\ e = 8,\ f = 2,\ g = -10$



$P_1 = a.b$
$P_2 = c.d$
$S_1 = P_1 + P_2$
$P_3 = e.f$
$S_2 = S_1 + P_3$
$S_3 = S_2 + g$
$P_4 = S_3 . V_1$
$V_1 = -1$
$S_4 = P_4 + y$
$L = S_4^2$

Derivadas parciais

$P_1 = a \cdot b$
$P_2 = c \cdot d$
$S_1 = P_1 + P_2$
$P_3 = e \cdot f$
$S_2 = S_1 + P_3$
$S_3 = S_2 + g$
$P_4 = S_3 \cdot V_1$
$V_1 = -1$
$S_4 = P_4 + y$
$L = S_4^2$

1º $\frac{\partial L}{\partial L} = 1$

2º $\frac{\partial L}{\partial S_4} = 2S_4 \Rightarrow 2 \cdot (-6) = -12$

3º $\frac{\partial L}{\partial y} = \frac{\partial L}{\partial S_4} \cdot \frac{\partial S_4}{\partial y} \Rightarrow (-12) \cdot 1 = -12$

4º $\frac{\partial L}{\partial P_4} = \frac{\partial L}{\partial S_4} \cdot \frac{\partial S_4}{\partial P_4} \Rightarrow (-12) \cdot 1 = -12$

5º $\frac{\partial L}{\partial V_1} = \frac{\partial L}{\partial P_4} \cdot \frac{\partial P_4}{\partial V_1} \Rightarrow (-12) \cdot S_3 \Rightarrow (-12) \cdot (-44) \Rightarrow 528$

6º $\frac{\partial L}{\partial S_3} = \frac{\partial L}{\partial P_4} \cdot \frac{\partial P_4}{\partial S_3} \Rightarrow (-12) \cdot V_1 = (-12) \cdot (-1) \Rightarrow 12$

7º $\frac{\partial L}{\partial g} = \frac{\partial L}{\partial S_3} \cdot \frac{\partial S_3}{\partial g} \Rightarrow 12 \cdot 1 = 12$

8º $\frac{\partial L}{\partial S_2} = \frac{\partial L}{\partial S_3} \cdot \frac{\partial S_3}{\partial g} \Rightarrow 12 \cdot 1 = 12$

9º $\frac{\partial L}{\partial P_3} = \frac{\partial L}{\partial S_2} \cdot \frac{\partial S_2}{\partial P_3} \Rightarrow 12 \cdot 1 = 12$

10º $\frac{\partial L}{\partial S_1} = \frac{\partial L}{\partial S_2} \cdot \frac{\partial S_2}{\partial S_1} \Rightarrow 12 \cdot 1 = 12$

11º $\frac{\partial L}{\partial f} = \frac{\partial L}{\partial P_3} \cdot \frac{\partial P_3}{\partial f} \Rightarrow 12 \cdot 8 = 96$

12º $\frac{\partial L}{\partial e} = \frac{\partial L}{\partial P_3} \cdot \frac{\partial P_3}{\partial e} \Rightarrow 12 \cdot 2 = 24$

13º $\frac{\partial L}{\partial P_2} = \frac{\partial L}{\partial S_1} \cdot \frac{\partial S_1}{\partial P_2} \Rightarrow 12 \cdot 1 = 12$

14º $\frac{\partial L}{\partial P_1} = \frac{\partial L}{\partial S_1} \cdot \frac{\partial S_1}{\partial P_1} \Rightarrow 12 \cdot 1 = 12$

15º $\frac{\partial L}{\partial d} = \frac{\partial L}{\partial P_2} \cdot \frac{\partial P_2}{\partial d} \Rightarrow 12 \cdot 8 = 96$

16º $\frac{\partial L}{\partial c} = \frac{\partial L}{\partial P_2} \cdot \frac{\partial P_2}{\partial c} \Rightarrow 12 \cdot (-5) = -60$

17º $\frac{\partial L}{\partial b} = \frac{\partial L}{\partial P_1} \cdot \frac{\partial P_1}{\partial b} \Rightarrow 12 \cdot (-2) = -24$

18º $\frac{\partial L}{\partial a} = \frac{\partial L}{\partial P_1} \cdot \frac{\partial P_1}{\partial a} \Rightarrow 12 \cdot 5 = 60$