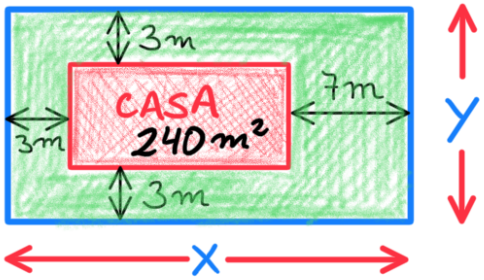


• CONDICIÓN (ÁREA CASA)

$$\underbrace{(X-10)}_{\text{LARGO}}\cdot\underbrace{(Y-6)}_{\text{ANCHO}}=240$$

$$Y-6=\frac{240}{X-10}$$

$$Y=\frac{240}{X-10}+6$$

• FUNCIÓN (ÁREA ZONA AJARDINADA)

$$A(x,y)=xy-240$$

$$A(x)=X\cdot\left(\frac{240}{X-10}+6\right)-240=\underbrace{\frac{240X}{X-10}+6X-240}_{A(x)}$$

$$A'(x)=\frac{240\cdot(X-10)-240X}{(X-10)^2}+6=\frac{240X-2400-240X}{(X-10)^2}+6$$

$$A'(x)=\frac{-2400}{(X-10)^2}+6$$

$$A'(x)=0 \Rightarrow \frac{-2400}{(X-10)^2}+6=0 \Rightarrow \frac{-2400}{(X-10)^2}=-6$$

$$-2400=-6(X-10)^2 \Rightarrow \frac{-2400}{-6}=\frac{-6(X-10)^2}{-6}$$

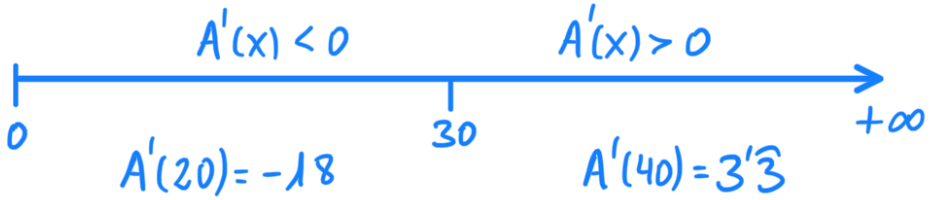
$$400=(X-10)^2 \Rightarrow X^2-20X-300=0$$

$X=30$

$X=-10$

• NO PROCEDE LONGITUD NEGATIVA

Monotonía



DECRECIENTE $X = 30\,m$ CRECIENTE

↓

Mínimo

$$Y = \frac{240}{30-10} + 6$$

$$Y = 18\,m$$

DIMENSIONES CASA
- LARGO: $20\,m$ ($X-10$)
- ANCHO: $12\,m$ ($Y-6$)

ÁREA ZONA AJARDINADA

$XY - 240$

$$30 \cdot 18 - 240 = 300\,m^2$$