

# Quitar paréntesis y simplificar

*Matemáticas con Juan*

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## Enunciado

Simplifica las siguientes expresiones paso a paso:

**Ejercicio (a)**  $a - (b + c - d)$

$$\begin{aligned} a - (b + c - d) &= a - b - c + d \\ &= \boxed{a - b - c + d} \end{aligned}$$

**Ejercicio (b)**  $a + 2(b - 4)$

$$\begin{aligned} a + 2(b - 4) &= a + 2b - 8 \\ &= \boxed{a + 2b - 8} \end{aligned}$$

**Ejercicio (c)**  $a - 2(b - 4)$

$$\begin{aligned} a - 2(b - 4) &= a - 2b + 8 \\ &= \boxed{a - 2b + 8} \end{aligned}$$

**Ejercicio (d)**  $b + 3(b + 3)$

$$\begin{aligned} b + 3(b + 3) &= b + 3b + 9 \\ &= 4b + 9 \\ &= \boxed{4b + 9} \end{aligned}$$

**Ejercicio (e)**  $b - 3(b + 3)$

$$\begin{aligned} b - 3(b + 3) &= b - 3b - 9 \\ &= -2b - 9 \\ &= \boxed{-2b - 9} \end{aligned}$$

**Ejercicio (f)**  $2a - 3b - 4(a - 2b)$

$$\begin{aligned} 2a - 3b - 4(a - 2b) &= 2a - 3b - 4a + 8b \\ &= -2a + 5b \\ &= \boxed{-2a + 5b} \end{aligned}$$

**Ejercicio (g)**  $3(a + b) - 3(a + 2b)$

$$\begin{aligned} 3a + 3b - 3a - 6b &= -3b \\ &= \boxed{-3b} \end{aligned}$$

**Ejercicio (h)**  $2(a + b) - 3(a - b) + 4(a + 2b - c)$

$$\begin{aligned}2a + 2b - 3a + 3b + 4a + 8b - 4c &= (2a - 3a + 4a) + (2b + 3b + 8b) - 4c \\ &= 3a + 13b - 4c \\ &= \boxed{3a + 13b - 4c}\end{aligned}$$

**Ejercicio (i)**  $5(a + b + c) - 5(a - b - c)$

$$\begin{aligned}5a + 5b + 5c - 5a + 5b + 5c &= (5a - 5a) + (5b + 5b) + (5c + 5c) \\ &= 10b + 10c \\ &= \boxed{10b + 10c}\end{aligned}$$

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Más ejercicios en:  
<https://www.youtube.com/@matematicaconjuan>