

## Multiplicacions amb arrels.

---

Exemple:

$$\begin{aligned}(3 + \sqrt{5})(3 - \sqrt{5}) &= 3(3 - \sqrt{5}) + \sqrt{5}(3 - \sqrt{5}) = \\ &= 9 - 3\sqrt{5} + 3\sqrt{5} - 5 = \\ &= 4\end{aligned}$$

Treu els paréntesis i simplifica:

a)  $\sqrt{2}(3 + \sqrt{5})$

f)  $(5 - \sqrt{2})(5 + \sqrt{2})$

b)  $\sqrt{6}(\sqrt{2} + \sqrt{8})$

g)  $(2 + \sqrt{5})(2 + \sqrt{3})$

c)  $4(\sqrt{5} + 3)$

h)  $(1 - \sqrt{2})(1 + \sqrt{3})$

d)  $(2 + \sqrt{3})(1 + \sqrt{3})$

i)  $(8 - \sqrt{2})(8 + \sqrt{2})$

e)  $(3 - \sqrt{5})(3 - 2\sqrt{5})$

j)  $(\sqrt{3} + \sqrt{5})(\sqrt{3} + \sqrt{5})$

Soluciones:

a)  $3\sqrt{2} + \sqrt{10}$

b)  $6\sqrt{3}$

c)  $4\sqrt{5} + 12$

d)  $5 + 3\sqrt{3}$

e)  $19 - 9\sqrt{5}$

f) 23

g)  $4 + 2\sqrt{3} + 2\sqrt{5} + \sqrt{15}$

h)  $1 + \sqrt{3} - \sqrt{2} - \sqrt{6}$

i) 62

j)  $8 + 2\sqrt{15}$