

## PROBLEMAS DE EXPRESIONES ALGEBRAICAS Y OPERACIONES

Problema 33:

Resolver

A)  $3\sqrt{-4} - \sqrt{-25} + 4\sqrt{-9}$

B)  $2\sqrt{-8} + \sqrt{-18} - \sqrt{-32}$

C)  $2\sqrt{-48} + 3\sqrt{-12} - 5\sqrt{-18} - 7\sqrt{-32}$

D)  $\sqrt{-a^2 + 2ab - b^2}$

Solución Problema 33:

$$\begin{aligned} A) 3\sqrt{-4} - \sqrt{-25} + 4\sqrt{-9} &= 3x2\sqrt{-1} - 5\sqrt{-1} + 4x3\sqrt{-1} \\ &= 6\sqrt{-1} - 5\sqrt{-1} + 12\sqrt{-1} = \mathbf{13\sqrt{-1}} \end{aligned}$$

$$\begin{aligned} B) 2\sqrt{-8} + \sqrt{-18} - \sqrt{-32} &= 2x2x\sqrt{-2} + 3x\sqrt{-2} - 4\sqrt{-2} = \\ 4\sqrt{-2} + 3\sqrt{-2} - 4\sqrt{-2} &= \mathbf{3\sqrt{-2}} \end{aligned}$$

$$\begin{aligned} C) 2\sqrt{-48} + 3\sqrt{-12} - 5\sqrt{-18} - 7\sqrt{-32} \\ 2\sqrt{16(-3)} + 3\sqrt{4(-3)} - 5\sqrt{9(-2)} - 7\sqrt{16(-2)} \\ 2x4\sqrt{-3} + 3x2\sqrt{-3} - 5x3\sqrt{-2} - 7x4\sqrt{-2} = \\ 8\sqrt{-3} + 6\sqrt{-3} - 15\sqrt{-2} - 28\sqrt{-2} = \\ \mathbf{14\sqrt{-3} - 43\sqrt{-2}} \end{aligned}$$

$$D)\sqrt{-a^2 + 2ab - b^2} = \sqrt{(-1)(a^2 - 2ab + b^2)}$$

$$\sqrt{-1(a - b)^2} = (a - b) \sqrt{-1}$$