

**EXAMEN GLOBAL PRIMERA EVALUACIÓN - 4º ESO - B**

**NOMBRE:** \_\_\_\_\_

**Exercise 1:** Solve the following equations:

- a) **(1 point)**  $\sqrt{3x+4} - \sqrt{x+2} = 2$   
b) **(1 point)**  $\frac{5}{x+1} + \frac{4}{x-1} = \frac{26}{x^2-1}$

**Exercise 2: (1 point)** Rationalize and simplify the following expressions:

- a)  $\frac{9\sqrt{12}}{\sqrt{3}} =$   
b)  $\frac{45}{\sqrt[3]{5}} =$   
c)  $\frac{\sqrt{8} - \sqrt{10}}{\sqrt{8} + \sqrt{10}} =$

**Exercise 3: (1 point)** Work out the value of the following expressions:

- a)  $7'21 \cdot 10^{-5} + 2'45 \cdot 10^{-7} - 5'35 \cdot 10^{-3} =$   
b)  $(1.53 \cdot 10^{-5}) \cdot (2.47 \cdot 10^{-2}) : (7.2 \cdot 10^{-9}) =$

**Exercise 4: (1 points)** Round the golden ratio  $\Phi$  to three significant figures and estimate both the absolute and relative errors.

**Exercise 5: (1 point)** Find the solution of the inequalities:

- a)  $x^3 - 5x^2 + 9x + 9 \leq 0$   
b)  $x^2 + 5x + 20 \leq 0$

**Ejercicio 6: (1 ptos)** Find the value of  $m$  so that when dividing the polynomial  $P(x) = 5x^3 - x^2 + mx - 2$  by  $(x+3)$  the remainder is 7

**Exercise 7: (3 points)** You better know what to do:

- a)  $\left. \begin{array}{l} xy = 12 \\ x^2 + 2y^2 = 34 \end{array} \right\}$   
b)  $\left. \begin{array}{l} x + 2y < 0 \\ 3x + y \geq -5 \end{array} \right\}$   
c)  $\left. \begin{array}{l} x^2 + 3x - 10 \geq 0 \\ x^2 - 4 < 0 \end{array} \right\}$

**GOOD LUCK !!!**