

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 Φ 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 !!!