



**SECOND TERM GLOBAL TEST**  
**2° ESO**



**Exercise 1: (1 pto)** Evaluate the polynomial  $P(x) = 5x^3 - 7x^2 - 4x - 9$  when  $x = 2$  and when  $x = -1$ :

**Exercise 2: (3.25 ptos)** Solve the following equations:

a)  $\frac{x-5}{3} - \frac{2x-3}{5} = \frac{4-3x}{2} - 1$

b)  $3x^2 - 75 = 0$

c)  $9x^2 - 3x = 0$

d)  $x^2 - 10x + 25 = 0$

e)  $x^2 - 6x - 7 = 0$

f)  $15x^2 - 7x - 2 = 0$

**Exercise 3: (1 pto)**

a) Take out common factors:  $12x^2y^5 - 6x^2y^3 - 18x^7y^3 =$

b) Expand using quadratic multiplication formulas:  $(5x^3 - 7x^5)^2 =$

**Exercise 4: (1.5 ptos)** Given the polynomials  $P(x) = 2x^3 - 5x^2 + 4$ ,  $Q(x) = 4x^3 - 7x^2 - 5x$  and  $R(x) = 2x - 3$ , work out:

a)  $P + Q =$

b)  $P - Q =$

c)  $P \cdot R =$

**Exercise 5: (1.25 ptos)** Solve the following equations:

a)  $(2x + 3)(2x - 3) = 7$

b)  $(x - 2)^2 + (x + 1)^2 = 17$

**Exercise 6: (1 pto)** I had to go to the supermarket again to buy more sardines because my seagull is ravenous (she doesn't like hake). If the first day ate one third of the sardines, the second day she ate five eighths of the remaining ones and I still have nine sardines left. How many sardines did I buy?

**Exercise 7: (1 pto)** Work out:

a)  $2^{-2} - 2^{-3} =$

b)  $4^{-2} - \left(2 - \frac{2}{3}\right)^{-2} + \left(\sqrt{\frac{2}{5} \cdot \frac{5}{8}}\right)^{-1} =$

