

ALGEBRA TEST - 1º ESO

Exercise 1: (1.25 points) Solve the following equations:

a) $9x = 63$

b) $\frac{x}{5} = 8$

c) $\frac{3x}{2} = 18$

d) $6x + 2 = 44$

e) $17 - 5x = 8$

Exercise 2: (2.5 points) Solve the following equations:

a) $3x - 5 + 4x = 10 - 3x + 5$

b) $3(5x - 2) + 3(x - 5) = 9 - 7x$

c) $5(7 - 3x) - (2x - 3) = 5x - 3(x - 4)$

d) $4(x + 5) - 3(2x + 1) = 17 - 2x$

Exercise 3: (1.25 points) Work out the numerical value of the following polynomials:

a) $P(x) = x^3 - 3x^2 + 8x - 1$ when $x = 3$

b) $Q(a, b) = 5ab + 2a - 3b$ when $a = 2, b = -1$

Exercise 4: (0.75 points) The consecutive of a number plus ten, equals the double of that number minus fifteen. Find the number.

Exercise 5: (1.25 points) En un taller hay motos y coches. En total tenemos 45 vehículos y 142 ruedas. ¿Cuántos coches y motos hay?

Exercise 6: (1 point) Write the following statements with algebraic language:

a) The square of a number

b) The double of a number plus sixty

c) The half of a number minus the third part of that number

d) The sum of two numbers

Exercise 7: (1 point) Work out:

a) $9x + 3x - x - x =$

b) $4x^2 - 5x + 7 + x^2 - 3x + 9 =$

c) $3x^2y - 2xy^2 + 7xy^2 - 6x^2y =$

Exercise 8: (1 point) Indicate the coefficient, the literal part and the degree of the following monomials:

a) $-7a^4b^2c$

b) $\frac{5}{4}xyz$

c) -2

d) y^{-5}