

ALGEBRA TEST

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

- a) The consecutive of a number
- b) The double of a number minus five
- c) The square of a number plus its half
- d) The product of three numbers

Exercise 2: (1 point) Work out:

- a) $5x + 2x - x + 3x =$
- b) $4x^2 - 7x + 8 - 9x^2 - 3x + 2 =$
- c) $4x^2y - 5xy^2 - 3xy^2 - x^2y =$

Exercise 3: (1 point) Indicate the coefficient, the literal part and the degree of the following monomials:

- a) $5x^3yz^4$
- b) $-8abc$
- c) w
- d) x^{-2}

Exercise 4: (1.25 points) Solve the following equations:

- a) $7x = 63$
- b) $\frac{x}{8} = 5$
- c) $\frac{2x}{3} = 18$
- d) $5x + 3 = 28$
- e) $29 - 7x = 5$

Exercise 5: (2.5 points) Solve the following equations:

- a) $7x - 4 + 3x = 5 - 9x + 2$
- b) $5(3x - 2) + 4(x + 3) = 8 - 5x$
- c) $2(4x - 9) - (x - 4) = 3x - 2(x - 8)$
- d) $3(x + 5) - 4(2x + 3) = -5x + 9$

Exercise 6: (1.25 points) Work out the numerical value of the following polynomials:

- a) $P(x) = x^3 - 3x^2 + 8x - 1$ when $x = 2$
- b) $Q(a, b) = 5ab + 2a - 3b$ when $a = 1, b = -2$

Exercise 7: (0.75 points) The double of a number plus seven equals the triple of that number minus ten. Find the number.

Exercise 8: (1.25 points) En un taller hay coches y motos. En total tenemos 30 vehículos y 86 ruedas. ¿Cuántos coches y motos hay?