

EQUATIONS TEST – 2º ESO

Exercise 1: (1.75 ptos) Solve the following linear equations:

- a) $6x - 5 + 7x - 2 + x - 9 = 8x - 1 - 3x - 5 - 6 - 4x$
- b) $7(x - 3) - (x - 5) = 4(2x - 5)$
- c) $2(5x - 1) - 4(x - 7) = 3x + 3(x - 4)$

Exercise 2: (1.75 ptos) Solve these equations:

- a) $\frac{2(x-4)}{3} - \frac{x-7}{4} = 1 - \frac{5x-3}{6}$
- b) $\frac{5}{2x-7} = \frac{-3}{x+4}$
- c) $\frac{10-4x}{5x+9} = \frac{2}{3}$

Exercise 3: (0.5 ptos) The sum of a number and its consecutive is one hundred and ninety-five. Find the numbers.

Exercise 4: (2 ptos) Solve the following quadratic equations without using the formula:

- a) $3x^2 - 108 = 0$
- b) $5x^2 + 3x = 0$
- c) $49x^2 - 25 = 0$
- d) $25x^2 - 5x = 0$

Exercise 5: (2 ptos) Solve the following quadratic equations:

- a) $x^2 + 8x + 7 = 0$
- b) $x^2 + 2x - 8 = 0$
- c) $x^2 - 14x + 49 = 0$
- d) $6x^2 + x - 2 = 0$

Exercise 6: (0.75 ptos) In an isosceles triangle, the length of the height is 7 m less than the length of the base and its area measures 22 m^2 . What's the length of the base?

Exercise 7: (1.25 ptos) Solve:

- a) $(x-3)^2 - 2x = 2(x-6)$
- b) $\frac{x^2 - 2x}{3x - 4} = \frac{x}{2}$

