Junior Certificate – Algebra Revision 2

Simultaneous Equations & Quadratic Equations

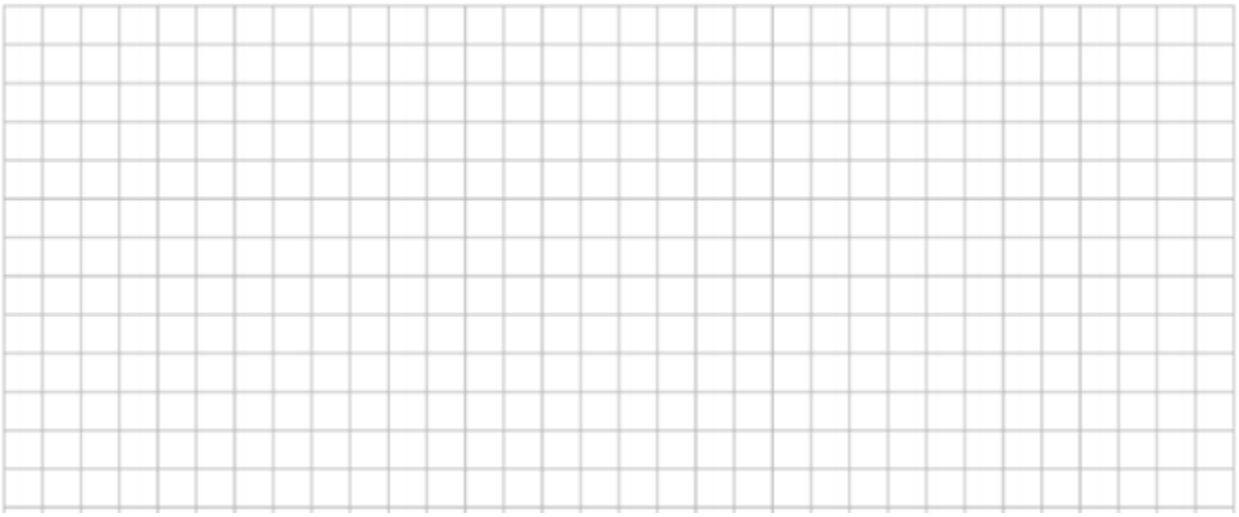
Simultaneous Equations

1. Find the value of the two variables in the given problem.

$$3x + 2y = 13$$
$$4x - 3y = 6$$

2. Find the value of the two variables in the given problem.

$$3y = -12$$
$$5x - 2y = 13$$



3. Find the value of the two variables in the given problem.

$$5x + 10y = 11$$
$$2x + y = 2$$

4. Find the value of the two variables in the given problem

$$\frac{p}{2} + \frac{q}{3} = \frac{1}{5}$$
$$p - q = \frac{7}{5}$$

Quadratic Equations

5. Solve for x

$$3x^2 + 10x = 8$$

6. Solve for x.

$$2x^2 + \mathrm{x} - 3 = 0$$

7. Solve for x

$$(2\mathrm{x} - 3)(\mathrm{x} + 5) = 0$$

8. Solve for x

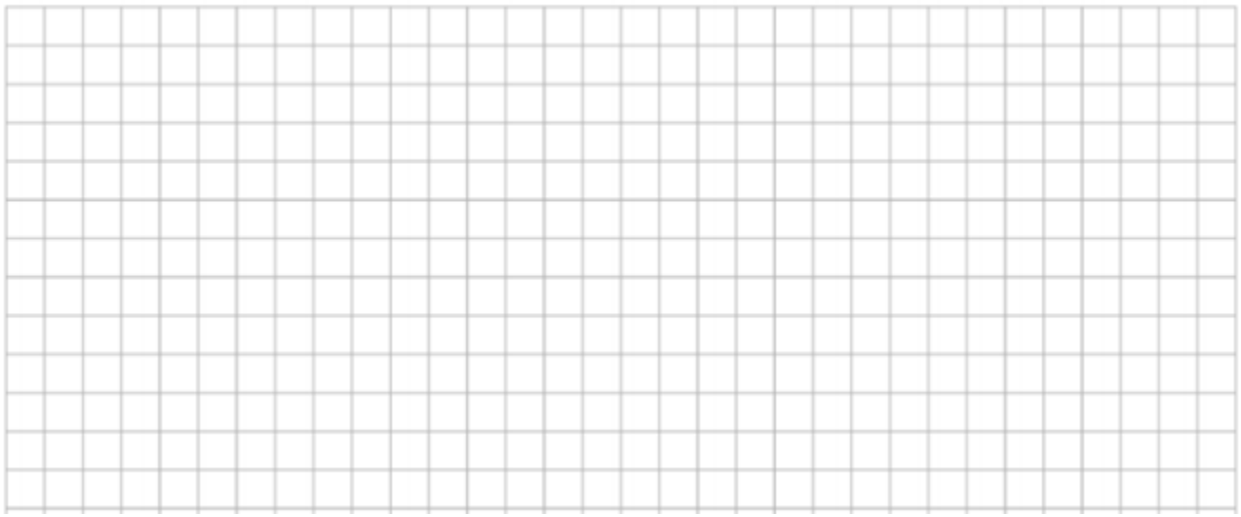
$$\frac{4x^2 - 3}{11} = \mathrm{x}$$

9. Using the –b formula solve for x.

$$3x^2 + 10\mathrm{x} + 4 = 0$$

10. Using the –b formula solve for x

$$2x^2 + 3x - 4 = 0$$



11. Quadratic Equation using substitution, find values for x and y…

$$x^2 - 2x - 8 = 0$$
$$(y-3)^2 - 2(y-3) - 8 = 0$$

12. If the root the values of a quadratic function are as given below construct the corresponding function, form the corresponding quadratic equation.

$$x = 2\,, x = 3$$

13. If the root the values of a quadratic function are as given below construct the corresponding function, form the corresponding quadratic equation

$$x = -1, x = 1$$

14. If the root the values of a quadratic function are as given below construct the corresponding function, form the corresponding quadratic equation

$$x = -7, x = 5$$