# Equations

**Section A:**

Show that is a root of the equation

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Show that and are roots of the equation

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Show that is a root of the equation

Match each equation to **all** of its roots. There may or may not be more than one root… Deliberately, there are more claimed roots than equations.



*x* = -9

*x* = -3

*x* = 7

*x* = -5



**

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*x* = 1

*x* = -2



*x* = 4

**Section B** By trial and error, find the solutions to the following equations. The number of roots that make up the solution is shown in brackets. All the roots are positive integers.

1.  (1)
2.  (1)
3.  (2)
4.  (2)
5.  (3)
6.  (1)
7.  (3)
8.  (2)

**Section C:** Match the pairs of equations to the solutions which satisfy them.



*x* = -2 and *y* = -1

*x* = 3 and *y* = 7

** and *y* = 1

*x* = -1 and *y* = 6

*x* = 2 and *y* = 5

** and **

*x* = 4 and *y* = -3





*x* = -5 and *y* = 2



\* Claim and verify. There are two roots.

**Finding Solutions - Homework**

By trial and error, find the solutions to the following equations. The number of roots that make up the solution is shown in brackets. All the roots are positive integers (whole numbers).

1.  (1)
2.  (2)
3.  (2)
4.  (2)
5. \* (3)

\* (A question for only the exceptionally brave root spotter!)

Guide for question 1

**Show that is a root of the equation**

We have to 5 into the equation.

This means to replace the letter with the number .

Calculate the value:

If it equals 4, tick it to show that it satisfies the equation.