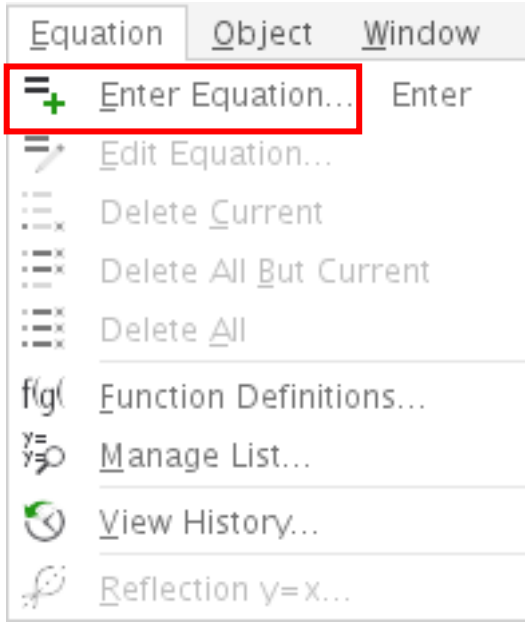
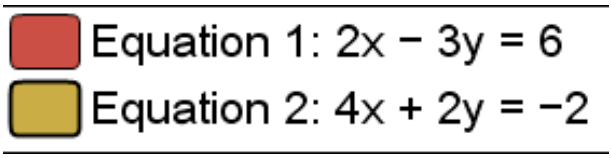
Autograph Webinar
How to: Solve Equations

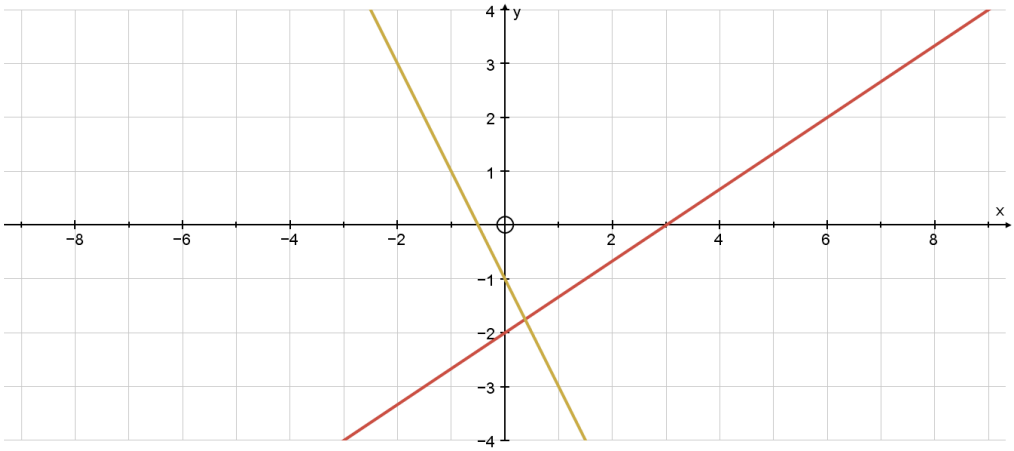
1. We want to create a graph of the form y = mx + c

From the top toolbar select **Equation** and then select **Enter Equation**



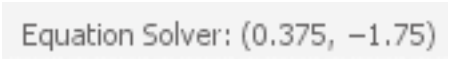
2. Enter the equation 2x – 3y = 6
&
4x + 2y = -2





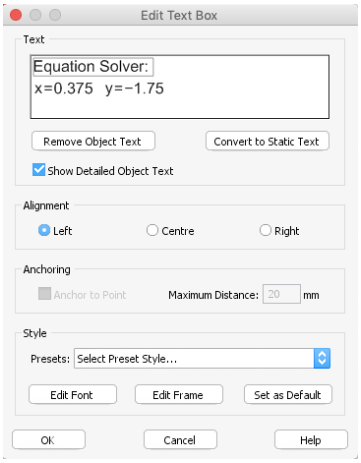
3. Select both graphs.
Right click, **Point**, **Solve intersection**

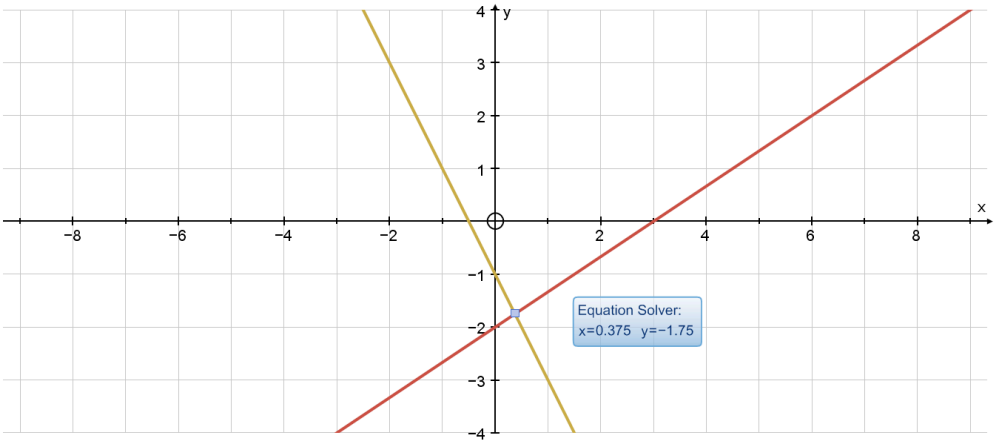
A point will be created and the solution displayed in the bottom bar.



4. To display the coordinates of the point click 

Select **Ok**





5. You can solve f(x) = 0 for each of the lines

Edit the axes to go from y = -10 to 10 using the edit axes setting

Solve the following pairs of equations using the intersection.

1.

$$2x + y = 18$$
$$x - 2y = -1$$

2.

$$5x + 2y = -30$$
$$3x + 4y = -32$$

3.

$$14(x + y) = 14$$
$$5y - 3x = -11$$

4.

$$5x = 7 + 6y$$
$$8y = x + 2$$

5.

$$24x + 12y + 7 = 0$$
$$6x + 12y - 5 = 0$$

6.

$$4x + 1\tfrac{1}{2}y = 5\tfrac{1}{2}$$
$$6x - 2y = 21$$

7. Two numbers have a sum of 23 and a difference of 5

What are the two numbers? x = ... y = ...

8. Two numbers have a difference of 6.
Twice the larger number plus the smaller number also equals 6.

What are the two numbers? x = ... y = ...

9. Tickets for a theatre production cost:

£3.50	Child
£5.25	Adult

94 tickets were sold for a total of £365.75

How many children attended the production?

10. Can you think up your own interesting puzzles.

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