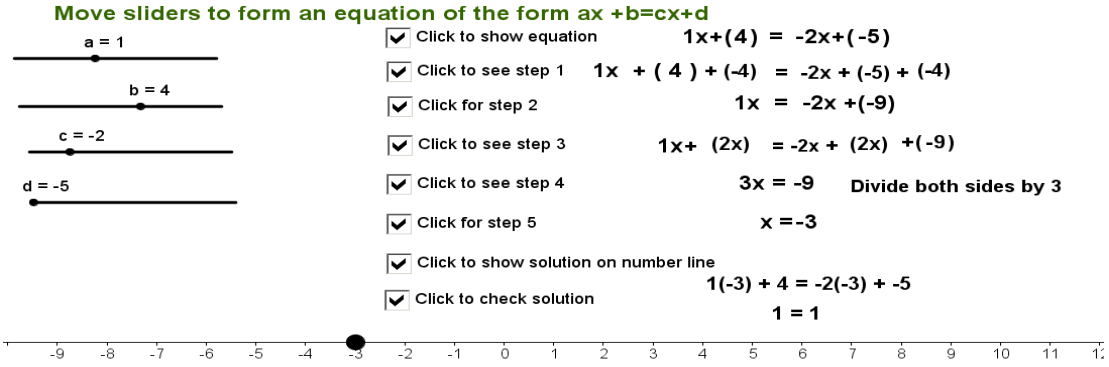
Student Activity: To solve equations of the form a*x* + b =c*x*+d

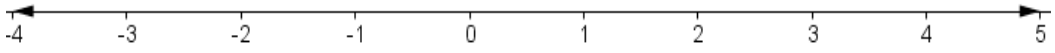
Use in connection with the Interactive file, 'ax + b =cx + d', on the Student's CD.



1. Using algebra **solve** the following equations, **show your solution on the number line** provided and **check solution**:

a.

	Action to the left hand side of the equation.	2*x* +3 =*x* +7	Action to the right hand side of the equation.
Step 1			
Step 2			
Step 3			
Step 4			
Step 5			



Check solution.

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b.

	Action to the left hand side of the equation.	2*x* + 2 = 4*x* – 6	Action to the right hand side of the equation.
Step 1			
Step 2			
Step 3			
Step 4			
Step 5			

Check solution.

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c.

	Action to the left hand side of the equation.	$3x - 3 = 2x + 8$	Action to the right hand side of the equation.
Step 1			
Step 2			
Step 3			
Step 4			
Step 5			

Check solution.

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d.

	Action to the left hand side of the equation.	$3x - 8 = 4x - 5$	Action to the right hand side of the equation.
Step 1			
Step 2			
Step 3			
Step 4			
Step 5			

Check solution.

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2. If you are checking your solution, and you find that the left hand side is not equal to the right hand side, what does this mean and what should you now do?

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3. Solve the following equations using algebra, show your solution on the number line provided and check your solution:

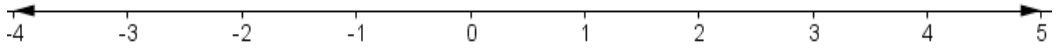
a) $3x - 6 = -2x + 9$

Check solution.

b) $4x + 4 = 2x + 5$

Check solution.

c) $-3(x + 2) + 5 = x + 3$



Check solution.

4. A number is doubled and then three is added to it. This number is now equal to four times the original number minus seven. Show how this be can represented as an equation? Solve the equation and check your answer.

5. A farmer has a number of sheep and he buys three more. He then doubles this number of sheep and discovers he has five times the original number less three.

6. A woman is four times as old as her daughter was two years ago. The sum of their current ages is 52. Use an equation to find their present ages.

7. The sum of three consecutive numbers is 18. Use an equation to find what the numbers are.

8. Samantha had €40. After buying five CD's of the same value in a sale, she has €6 left. Represent this situation as an equation and solve the equation to find the cost of a CD.