Objective 4 - Solve Linear Equations

Solve linear equations.

Link to section in online textbook.

Now, watch this video to review how to solve linear equations. These techniques will be used throughout most of the semester. Be sure to write notes to yourself that you can review later!

Now try to solve the following linear equations.

Exercise 1 *Solve the equation below.*

??(??) = ??(??)

$x =$??

Feedback(*`incorrect`*): *Did you get* **??** *as your answer? If so, you are not distributing correctly. Remember that if you have something like* $-3(2x-1)$*, you need to distribute the* -3 *to BOTH* $2x$ *and* -1 *to get* $-6x+3$*.*

Exercise 2 *Solve the equation below.*

??(??) = ??(??)

$x =$??

Feedback(*`incorrect`*): *Did you get* **??** *as your answer? If so, you are not distributing correctly. Remember that if you have something like* $-3(2x-1)$*, you need to distribute the* -3 *to BOTH* $2x$ *and* -1 *to get* $-6x+3$*.*

Exercise 3 *Solve the equation below.*

??(??) = ??(??)

$x =$??

Feedback(*`incorrect`*): *Did you get* **??** *as your answer? If so, you are not distributing correctly. Remember that if you have something like* $-3(2x-1)$*, you need to distribute the* -3 *to BOTH* $2x$ *and* -1 *to get* $-6x+3$*.*

Learning outcomes: Recognize and construct linear functions as well as solve linear equations.

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Exercise 4 *Solve the equation below.*

$$\frac{??}{??} - \frac{??}{??} = \frac{??}{??}$$

Hint: *Adding/Multiplying fractions can be difficult and tedious. Is there something we can multiply both sides of the equation by to remove the fractions from the equation?*

$x = \boxed{??}$

Feedback(*`attempt`*): *There are two common issues when solving linear equations:*

The first we saw in the previous set of problems: not distributing correctly. If you got **??**, *check that you distributed any negatives correctly.*

The second common issue is not dividing correctly. If we have a fraction like $\frac{6x-4}{2}$, *the 2 is dividing* ***both*** *parts. So, this would become* $3x-2$ *and not* $3x-4$. *If you got* **??**, *you made this type of mistake.*

If you made both of these mistakes, you got **??**. *Restart the problem and correct both issues.*

Exercise 5 *Solve the equation below.*

$$\frac{??}{??} - \frac{??}{??} = \frac{??}{??}$$

$x = \boxed{??}$

Feedback(*`attempt`*): *There are two common issues when solving linear equations:*

The first we saw in the previous set of problems: not distributing correctly. If you got **??**, *check that you distributed any negatives correctly.*

The second common issue is not dividing correctly. If we have a fraction like $\frac{6x-4}{2}$, *the 2 is dividing* ***both*** *parts. So, this would become* $3x-2$ *and not* $3x-4$. *If you got* **??**, *you made this type of mistake.*

If you made both of these mistakes, you got **??**. *Restart the problem and correct both issues.*

Exercise 6 *Solve the equation below.*

$$\frac{??}{??} - \frac{??}{??} = \frac{??}{??}$$

$x = \boxed{??}$

Feedback(*`attempt`*): *There are two common issues when solving linear equations:*

The first we saw in the previous set of problems: not distributing correctly. If you got **??**, *check that you distributed any negatives correctly.*

The second common issue is not dividing correctly. If we have a fraction like $\frac{6x-4}{2}$, *the 2 is dividing* ***both*** *parts. So, this would become* $3x-2$ *and not* $3x-4$. *If you got* **??**, *you made this type of mistake.*

If you made both of these mistakes, you got **??**. *Restart the problem and correct both issues.*