

Each student should work these problems on his or her own paper (not on this document). Students in a given group should **work together**. If you as an individual are working on problem x while others in your group are working on problem y , then your group is **not** working together. It's not a race – if you think these problems are easy, maybe you can explain something to someone else who hasn't quite caught on to the idea yet. If you think a problem is really tough, maybe someone in your group will explain it in a way that makes sense to you. Maybe just talking about the problem will help you understand it better no matter what you think going into the activity. This is what group work is all about.

Use the addition property of equations to solve each equation. Make sure that you show **all** of the steps illustrated in class and in your textbook.

b. Solve $\frac{4}{5} = \frac{4}{15} + x$.

Use the multiplication property of equations to solve each equation. Make sure that you show **all** of the steps illustrated in class and in your textbook.

b. Solve $-\frac{2}{9}w = -\frac{7}{54}$.

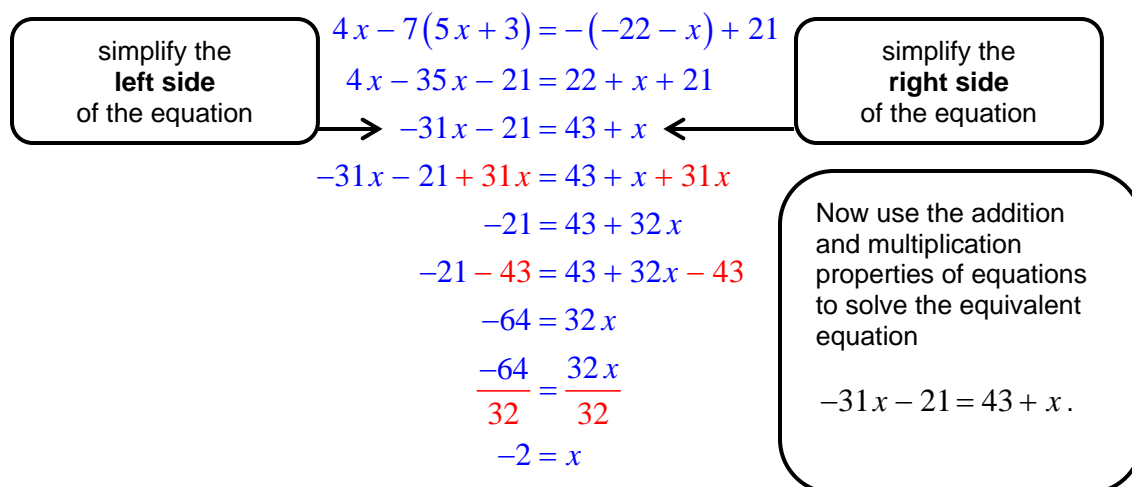
Solve each equation. Make sure that you show **all** of the steps illustrated in class and in your textbook.

b. Solve $6x = -10 + \frac{16}{3}x$.

d. Solve $4 - 12y = -22 - 90y$

When solving linear equations, you sometimes need to completely simplify the expressions on either side of the equal sign before applying the addition and multiplication properties of equations. When doing this, you have to keep in mind that the way in which the expression on the left side of the equal sign simplifies has ***absolutely nothing*** to do with the way in which the expression on the right side of the equal sign simplifies.

Example: Solve $4x - 7(5x + 3) = -(-22 - x) + 21$



Check the solution **in the original equation** and then state “the solution to the equation is -2 .”

a. $5x - 7 + 3(x + 8) = 9 + 10x$

b. $14(t - 6) = 14t - 6(t - 14)$

c. $18 + \left(-4 - \frac{3}{2}w\right) = 6 - \left(\frac{1}{2}w - 8\right)$

d. $4 + 4\left(x + \frac{3}{2}\right) = 30x - 3$

e. $0.1x + 1.5(4 + x) = 43 - (2x + 1)$

f. $5 + 9t - 11 = -27(3 + 8t)$

g. $y + y + y = 18(2 - 5y + 29)$

h. $0.05N + 0.1(N + 17) = 0.25(N - 32)$

i. Pick **any three numbers** and show that they are **each one** is a solution to the equation:

$$-14 - 3(3x - 14) = 3 + x + 5(5 - 2x)$$

j. What really, **really** frustrating thing happens when you try to solve the equation:

$$2t + 6(8 - 4t) = 17 - (22t - 8)$$

