Standard A.REI.3

1.1 Solving Multi-Step Equations

Unit 1 Day 1

Solving Multi-Step Equations: Work the order of operations backwards until you have isolated the variable! Remember to think opposites!

NOTE: If there is only one fraction, isolate the fraction and then get rid of the denominator before you do anything else!

Step 1: Combine any like terms that follow order of operations.
Step 2: Look for any addition or subtraction, and do the opposite.
Step 3: Look for any multiplication or division, and do the opposite.
Step 4: Look for any exponents, and take the opposite root.
Step 5: Look for any parenthesis, and apply the opposite operation from what is inside the parenthesis.

Example 1: Solve $\left(\frac{x}{3}\right)+5=14$

Example 2: Solve $\left(\frac{x+5}{2}\right)-6=-5$

Example 3: Solve $3\left(\frac{c}{15}\right)-1=-31$

Challenge! Solve for x: $\frac{2x+6-4x}{4}=5$

Classwork: Complete the following in class for credit. Solve for each variable. Show all work for credit!

1. $2k-7=23$

2. $12=-5h+2$

3. $8+\left(\frac{c}{-4}\right)=12$

4. $5+4(n+9)=-3$

5. $7-4(d-3)=23$

6. $5=6(q-5)-19$

7. $2(3t-8)-4t=10$

8. $9-4(2p-1)=45$

9. $\frac{2x+4}{2}=8$

10. $\frac{7+x}{3}=9$

11. $\frac{2(x-4)}{5}=12$

12. $\frac{3(2+x)}{-5}=3$