Solving Equations Royal Rumble Lab

General Instructions:

- Pass out 2 cards to each student. Either an x and -1 or –x and 1 combination.
- Explain that once the main event starts, you will ask 1 student from each group to participate. For example start with 1 person from group 1, then ask 1 person from group 2, etc.
- Once the original equation is complete, then continue asking 1 person per group to come up and "toss" someone out of the "ring".
- Mention that students are graded on following group norms, participation (involved a minimum of 4 times).

Schematic Example:

Teacher Posts: 2 + x = -1
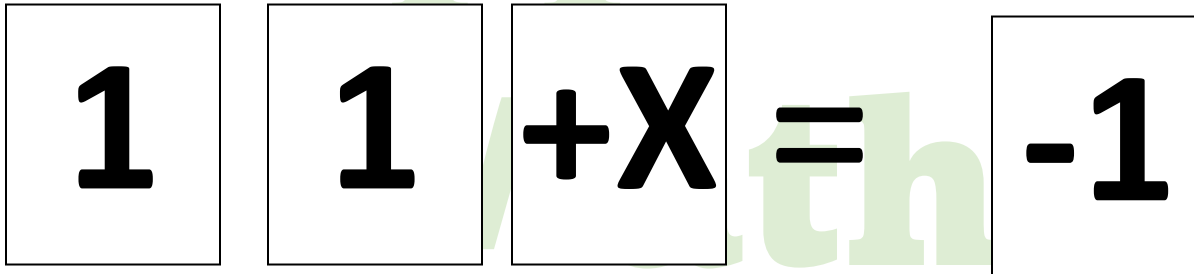
1	**1**	**+X**	**=**	**-1**
Student 1	Student 2	Student 3		Student 4

Teacher announces time to "toss" people out aka create zeros.

See next page for step by step process

Additional Problems to Use:

-4 = 2x – 2	2x - 3 = 3	4x – 3 = 5x + 4
2x – 2 = x + 4	3 – 2x = 2x – 3	3 – x = 4 + -2x

- To deal with fractions, print dashed lines on the back of the 1's cards (4x4) matrix. Students can cut up the page into the proper number of fractions (halves, fourths, eights, etc.)
- When you end with a negative x (like –x = 3), say "we know –x but we want x which is the opposite. So someone with an x switch with the –x. Since we made the left side opposite, we also have to make the right side opposite. So let's have three -1's switch with the 1's."

First move

| 1 | 1 | X | = | -1 |

~~1~~
~~-1~~
Student 5

-1
Student 6

Next move

| 1 | X | = | -1 | -1 |

~~1~~
~~-1~~
Student 7

-1
Student 8

Final Result

| X | = | -1 | -1 | -1 |

$$X = -3$$

Additional Practice Problems (Use the same process as we did during the Royal Rumble)

1. $x - 3 = 4$

2. $2x - 2 = 4$

3. $4x - 3 = x + 6$

4. $4 - 2x = 4x + 2$

5. $5x - 1 = 3 + 2x$

6. $2 + 2x = 8x - 2$

7. $4.5x = 5 - 2x$

8. $1.25 - 4x = 2.5x + 2$

Scored Items	Points Possible	What you think you deserve	Teacher Score
Participation - minimum of 4 times in the main event	12		
Positive Group Norms Followed, Negative Norms Avoided	15		
Additional Practice Problems complete	8		
Total	**35**		