## Fl OPERATIONS <br> With Rational Numbers and Algebraic Equations



## Thank you

FOR YOUR

Please enjoy this complimentary excerpt from Figuring Out Fluency - Operations With Rational Numbers and Algebraic Equations.

## ACTIVITY 6.10

## Name: The Transformer

About the Game: This is a fun way to give students opportunities to choose and use different basic transformations to start solving equations.

Materials: The Transformer game board (one per player); Solving for Unknowns cards (or a worksheet cut up into cards—be sure the worksheet has problems with a variety of options for first steps), 10 counters per player

Directions: 1. Each player places their 10 counters on their game board. They must place at least 1 in each box, but can otherwise place as many as they want in a particular box.
2. At the same time, each player draws an equation card and determines the basic transformation (first step) they will use. In the space provided below the game board, they enact the step they chose and complete the problem.
3. Players then take turns showing the other players their first step and successful completion. If correct, they remove a chip from that box.
4. The first player to clear all their counters wins.
5. Optional rule: If a student can solve the problem using relational thinking, it is like a wild card and they can remove a counter from any box.

For example, Michael draws, $5-2(x+1)=1$. He decides to subtract 5 from both sides as his first step and solves the problem to get $x$ equals 1 . He removes one counter from the Add/Subtract on Both Sides of the Equation box.

|  |  |  |  |
| :---: | :---: | :---: | :---: |
| Combine Like Terms <br> (Same Side of <br> Equation) | Add/Subtract on <br> Both Sides of the <br> Equation | Multiply/Divide on <br> Both Sides of the <br> Equation | Apply the Distributive <br> Property |

## Transformer Game Board

|  |  |  |  |
| :---: | :---: | :---: | :---: |
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