

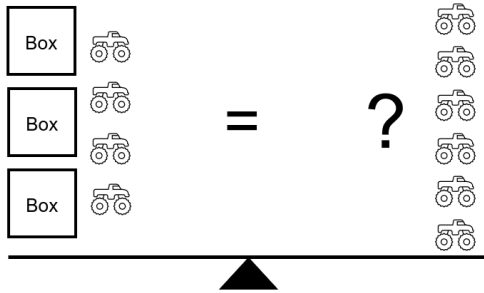
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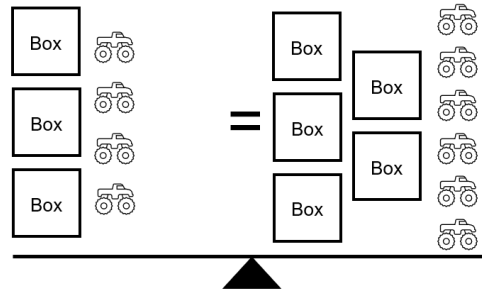
Smallest Solution

Diagnostic Assessment

1. If there are two toy trucks in each box, how many boxes need to be on the right side of the scale to keep it balanced? Explain.



2. Is this scale possible? If it is possible, how many trucks would be in each box? If it is not possible, how would you change *the number of trucks not in boxes* to make it possible?



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Smallest Solution

Smallest Solution

1. Choose any four numbers to go into the empty boxes below.

0	1	2	3	4
5	6	7	8	9

2. Based on the numbers you chose, create, and solve the equation below. Have your partner check your answer.

0	1	2	3	4
5	6	7	8	9

$$\square x + \square = \square x + \square$$

Name: _____

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Smallest Solution

Closest to Zero!

3. Do you believe that your equation in #2 gives us the “smallest” solution or the number that’s closest to zero? If yes, explain why. Otherwise, change your numbers below to create an equation with an even closer to zero.

Explain:

0	1	2	3	4
5	6	7	8	9

$$\square x + \square = \square x + \square$$

4. Explain why the numbers cannot be used to create an equation that has a solution of EXACTLY zero.
5. Eliza claims she can create an equation using the numbers that have NO SOLUTION. Axel says this is impossible – that every equation created with the numbers will have a solution. Who is right? Explain.