One Step Two Step Multistep Equations

The goal is to isolate the variable.

(You want to get the variable by itself.)

**One Step Equations**

**HINT** Perform the OPPOSITE action.

1. Solve for a

If addition, then subtract

|  |  |
| --- | --- |
| Given |  |
| Subtract 5 |  |
| Simplify |  |

If subtraction, then add.

|  |  |
| --- | --- |
| Given |  |
| Add 5 |  |
| Simplify |  |

If division, then multiply

|  |  |
| --- | --- |
| Given |  |
| multiply 5 |  |
| Simplify |  |

If multiplication, then divide

|  |  |
| --- | --- |
| Given |  |
| multiply 5 |  |
| Simplify |  |

Rearrange if necessary.

4) -5 + a = 10

|  |  |
| --- | --- |
| Given |  |
| Rearrange |  |
| Add 5 |  |
| Simplify |  |

Don’t ignore negatives.

4) -5a = 10

|  |  |
| --- | --- |
| Given |  |
| Add 5 |  |
| Simplify |  |

We Try:

1. A + 20 = 5

3)

4)

***Two Steps!***

\*HINT\* Isolate the variable again first.

1) 2a + 3 = 7 Isolate the a

|  |  |
| --- | --- |
| Given |  |
| Subtract 3 | =4 |
| Divide by 2 |  |

2)

|  |  |
| --- | --- |
| Given |  |
| Multiply by 3 |  |
| Add 1 |  |

Again, don’t forget the negatives.

3)

|  |  |
| --- | --- |
| Given |  |
| Subtract 5 |  |
| Multiply by -1 |  |

You Try with your partner

2)

Multistep Equations

Step One: Distribute if possible

Step Two:

Combine Like Terms

Step Three:

Move variables to one side, constants to the other side.

Step Four: Isolate the variable.

I try:

|  |  |
| --- | --- |
| Given |  |
| Distribute if possible |  |
| Combine Like Terms |  |
| Move variables to one side, constants to the other |  |
| Isolate the variable |  |

We Try

1)

|  |  |
| --- | --- |
| Given |  |
| Distribute if possible |  |
| Combine Like Terms |  |
| Move variables to one side, constants to the other |  |
| Isolate the variable |  |

2)

|  |  |
| --- | --- |
| Given |  |
| Distribute if possible |  |
| Combine Like Terms |  |
| Move variables to one side, constants to the other |  |
| Isolate the variable |  |

You Try with your partner

|  |  |
| --- | --- |
| Given |  |
| Distribute if possible |  |
| Combine Like Terms |  |
| Move variables to one side, constants to the other |  |
| Isolate the variable |  |

Closure:

Error Analysis

Discuss with your partner about what went wrong? What is the correct answer?

1)

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| --- |
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2)

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| --- |
|  |
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|  |
|  |

3)

|  |
| --- |
|  |
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