

# hessen 7.2

Class Notes If there was no class lecture this week, write a paragraph about what you learned and/or questions about what you didn't understand. Topic: _____ Questions/Main Ideas:	Name: _____ Class: _____ Period: _____ Date: _____ Notes:
What does it mean to simplify?	AF 4.1 Solving multi-step equations <u>Simplifying equations:</u> - what was first step in a two-step equation? <u>need to simplify</u> <u>Simplify</u> - combine like terms - write an equivalent expression with the fewest terms possible
combine like terms under subtraction →	<u>Example</u> $3m + 4 - 2m = -73$ $\begin{array}{r} 3m + 2m + 4 = -73 \\ m + 4 = -73 \\ -4 \quad -4 \\ \hline m = -77 \end{array}$ $-4m - 3m + 6 = -13$ $\begin{array}{r} -7m + 6 = -13 \\ -6 \quad -6 \\ \hline -7m = -19 \\ \frac{-19}{-7} = -2.7 \\ m = 3 \end{array}$
Summary:	

Questions/Main Ideas:

Notes:

lets say we know that two consecutive ~~numbers~~ integers have a sum of 23. If I want the two numbers how can I find them out?

If you have an integer  $n$  what would be the next number?

well let our first number be  $n$ .

The next consecutive integer could be presented as  $n+1$ .

So

$$n + (n + 1) = 23$$

two consecutive integers ~~could~~

$$n + (n + 1) = 23$$

$$2n + 1 = 23$$

$$\begin{array}{r} -1 \quad -1 \\ \hline \end{array}$$

$$2n = 22$$

$$\begin{array}{r} 2 \quad 2 \\ \hline \end{array}$$

$$n = 11$$

So our numbers are 11 and 12

Example

$$2(5x - 3) = 14 \quad \textcircled{1} \text{ (Distribute first)}$$

$$2(5x) - 2(3) = 14$$

$$10x - 6 = 14 \quad \textcircled{2} \text{ (undo subtraction)}$$

$$\begin{array}{r} +6 \quad +6 \\ \hline \end{array}$$

$$\frac{10x}{10} = \frac{20}{10}$$

$$x = 2$$

3 Steps to solve equation

Summary:



Questions/Main Ideas:

Notes:

### General Steps

- ① use distributive property if needed
- ② combine like terms
- ③ undo subtraction or addition
- ④ undo multiplication or division
- ⑤ simplify.

### Example

$$9(2c + 5) + 3c = -75$$

$$9(2c) + 9(5) + 3c = -75$$

$$18c + 45 + 3c = -75$$

$$21c + 45 = -75$$

$$\begin{array}{r} 21c + 45 = -75 \\ -45 \quad -45 \\ \hline 21c = -120 \end{array}$$

$$\frac{21c}{21} = \frac{-120}{21}$$

$$c = -\frac{40}{7}$$

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$$3 = \frac{1}{4}(m-4) + \frac{1}{4}m$$

$$3 = \frac{1}{4}m - 1 + \frac{1}{4}m$$

$$3 = \frac{1}{2}m - 1$$

$$\begin{array}{r} 3 = \frac{1}{2}m - 1 \\ +1 \quad +1 \\ \hline 4 = \frac{1}{2}m \end{array}$$

$$4 = \frac{1}{2}m$$

$$(2)(4) = (\frac{1}{2}m)(2)$$

$$8 = m$$

$$8 = m$$

Summary:

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(12-34 even)