

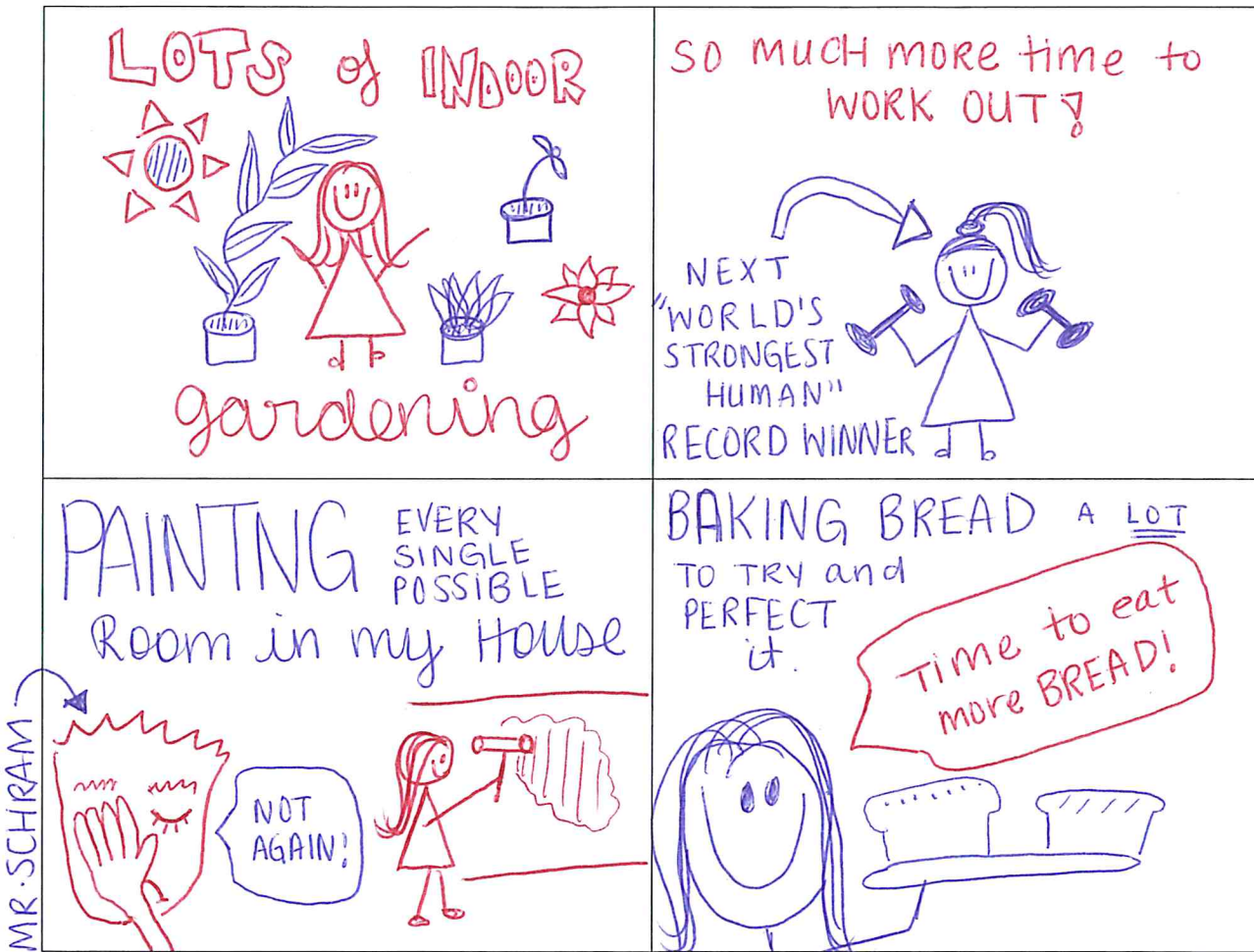
Hello Everyone!



Back to the good old stick person... it's my true Art "style" I think...

Here I am again, writing from the emptiness of my classroom. It's quiet and boring and weird.

I hope you are finding the time to practice some sweet new skills and hobbies. Here's my artistic representation of my sweet new skills since self-isolation began...



The majority of you are doing a great job of asking questions, getting help and staying connected through Teams. Great work! If you have not set this up yet, please do!

Keep your eyes peeled for videos helping explain your new learning this week on Teams and my website.

I hope you are healthy and happy and nerding out learning every day!

Ms. Burns

# 9 Math

Monday April 6<sup>th</sup> - Friday April 10<sup>th</sup>

- Hand in U3 Test to Hand-In bin (or photos sent to me online)
- Read and Fill-in U4LI
- U4LI Booklet Questions
- U4AI (coming Wednesday)

## Suggested Schedule:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
U4LI Notes	Send Ms. Burns a message to ask questions about what you don't understand	U4LI Booklet Questions	U4AI	

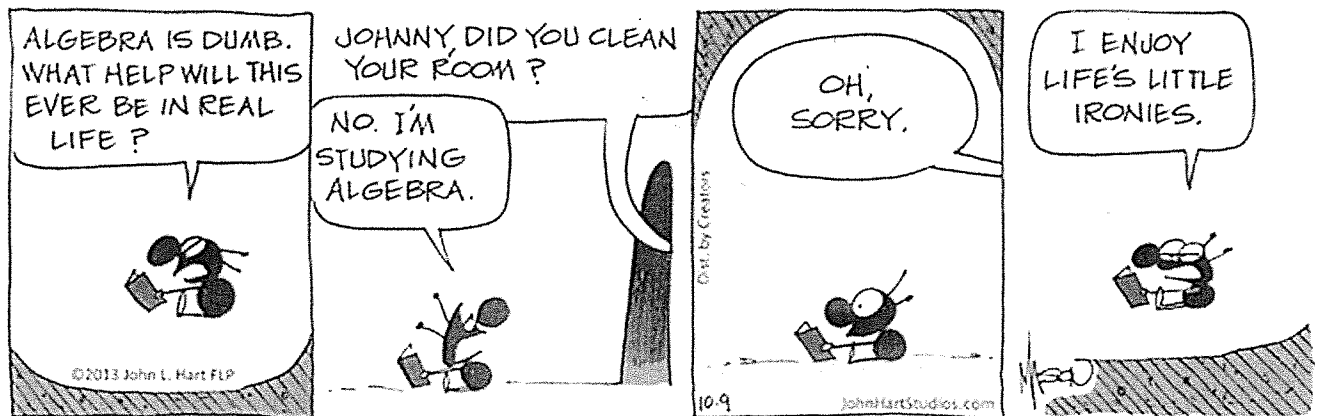
# 9 MATH

## U4: Algebra

### Work @ Home Package

Monday April 6<sup>th</sup> — Friday April 10<sup>th</sup>

NAME: \_\_\_\_\_



★ REVIEW: change words  $\Rightarrow$  numbers & symbols

### Translating Phrases - Linear Expression

ES1

Translate each verbal phrase into an algebraic expression:

- 1) The sum of  $x$  and 2  $x + 2$
  
- 2)  $t$  divided by 8  $t \div 8$
  
- 3) The product of 9 and  $m$
  
- 4) Subtract 5 from  $c$
  
- 5) Combine  $y$  and 7
  
- 6) Three-sevenths of  $h$
  
- 7) 3 multiplied by  $d$
  
- 8) One-quarter added to  $n$
  
- 9)  $b$  decreased by 10
  
- 10) One-half of  $k$

NAME: \_\_\_\_\_

# U4:L1 Algebra Review

\*\*\*Use highlighters, pencil crayons or markers to color coordinate and doodle on the notes to help remember\*\*\*

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Operation	Inverse
+	-
-	+
x	÷
÷	x
$x^2$	$\sqrt{x}$

When solving problems algebraically, you always...

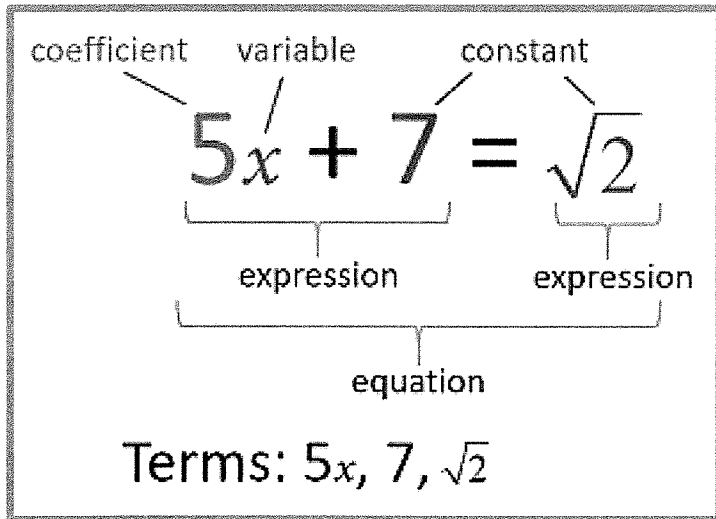
- 1) Do the **inverse** operation.
- 2) Do the same to both sides of the equal sign.

Examples:

$\begin{array}{r} x - 4 = 10 \\ +4 \quad +4 \\ \hline x = 14 \end{array}$	$\begin{array}{r} y + 2 = 12 \\ -2 \quad -2 \\ \hline y = 10 \end{array}$	$\begin{array}{r} 4x = 200 \\ \frac{4}{4} \quad \frac{200}{4} \\ \hline x = 50 \end{array}$	$\begin{array}{r} \cancel{2}x \frac{a}{\cancel{2}} = 7 \times 2 \\ \hline a = 14 \end{array}$
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Your turn:

$m - 5 = 10$	$b + 20 = 90$	$5x = 150$	$\frac{a}{9} = 7$
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**Remember...**

Equation has an **equal sign** ( $=$ )

Expression **does not**

1. Match the following terms to their definitions:

<b>CONSTANT</b>		A math phrase with an equals sign
<b>EXPRESSION</b>		A math phrase without an equals sign.
<b>EQUATION</b>		The <b>unknown</b> term (often expressed as a <b>LETTER</b> )
<b>VARIABLE</b>		A quantity that does not change (usually a <b>NUMBER!</b> )

2. Fill out the following table:

	VARIABLES	CONSTANTS	(CIRCLE ONE)
$x + 4$			EQUATION / EXPRESSION
$a + b + 7$			EQUATION / EXPRESSION
$44 = 11 + f$			EQUATION / EXPRESSION
$10 + 13 = 23$			EQUATION / EXPRESSION
$4 + 7$			EQUATION / EXPRESSION

# Solving TWO Step Equations

Solving two step equations follows the same steps as one step equations.

- 1) Do the **inverse** operation.
- 2) Do the same to both sides of the equal sign.

What inverse operation do I do first???

**BEDMAS backwards ... SAMDEB**

Examples:

$\begin{array}{r l} 3m - 5 = 10 & \\ +5 & +5 \\ \hline \cancel{3}m = 15 & \\ \cancel{3} & 3 \\ \hline m = 5 & \end{array}$	$\begin{array}{r l} 2b + 10 = 90 & \\ -10 & -10 \\ \hline \cancel{2}b = 80 & \\ \cancel{2} & 2 \\ \hline b = 40 & \end{array}$	$\begin{array}{r l} 5x - 5 = 150 & \\ +5 & +5 \\ \hline \cancel{5}x = 155 & \\ \cancel{5} & 5 \\ \hline x = 31 & \end{array}$	$\begin{array}{r l} \frac{a}{9} = 7 + 3 & \\ \times 9 & 10 \times 9 \\ \hline a = 90 & \end{array}$
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Your turn:

$5 + 2q = 11$	$\frac{b}{2} + 10 = 70$	$5 = 150 + 5c$	$7 = \frac{2a}{8}$
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Name:

Date:

Main Ideas/Questions

Notes/Examples

One-Step Equations

$$\begin{array}{r} 1. \quad m + 12 = 10 \\ \quad -12 \quad -12 \\ \hline m = -2 \end{array}$$

2.  $-2 = g - 9$

3.  $-7y = -91$

4.  $\frac{a}{9} = -4$

Fractions

To "get rid" of a fraction, multiply by the

RECIPROCAL !



"flipped fraction"

$$\begin{array}{r} 5. \quad \frac{3}{2}x = \frac{10}{3} \\ \frac{6}{6}x = \frac{30}{2} \\ \hline x = 15 \end{array}$$

6.  $\frac{4}{9}w = -8$

7.  $-\frac{6}{5}k = 12$

8.  $-\frac{1}{2}m = -9$

Two-Step Equations

To Solve a Two-Step Equation:

1. Undo the Addition/Subtraction (to remove constant term)
2. Undo the Multiplication/Division (to remove coefficient)

$$\begin{array}{r} 9. \quad 6x + 8 = 50 \\ \quad -8 \quad -8 \\ \hline 6x = 42 \\ \frac{6}{6} \quad \frac{6}{6} \\ \hline x = 7 \end{array}$$

10.  $2n - 5 = 11$

11.  $13 = -4k + 9$

$$\begin{array}{r} 12. \quad 7 - 3y = 34 \\ \quad -7 \quad -7 \\ \hline -3y = 27 \\ \frac{-3}{-3} \quad \frac{27}{-3} \\ \hline y = -9 \end{array}$$

★ Be careful with ⊖



$$13. \frac{x}{2} - 7 = 9$$

$$14. 11 = \frac{c}{-5} + 8$$

$$15. \frac{3}{5}x + 22 = 28$$

$$16. -\frac{1}{3}m + 1 = -7$$

Remember  
TOP x TOP  
BOTTOM x BOTTOM

$$\frac{3}{-1} \times \frac{-1}{3} m = \frac{-8}{1} \times \frac{3}{-1}$$

$$m = 24$$

$$17. -10 + \frac{7}{4}p = -38 \quad \text{SIMPLIFY!}$$

RECIPROCAL  
FRACTIONS  
(flipped  
fraction)

$$\frac{4}{7} \times \frac{7}{4} p = \frac{-28}{1} \times \frac{4}{7}$$

$$p = -16$$

$$18. 15 = 9 - \frac{1}{2}x$$

Watch Out!

The examples below are different in that the multiplication/division is done FIRST, followed by the addition/subtraction.

$$19. \frac{x+11}{8} = -3 \times 8$$

$$x+11 = -24$$

$$-11 \quad -11$$

$$x = -35$$

$$20. \frac{n-5}{-2} = -7$$

$$21. 1 = \frac{a-13}{-6}$$

$$22. 4 = \frac{w+8}{9}$$

