6th Grade Math Unit 4-Equations

P	eriod:	the one is brown by a majorith with seem and
in the relation are they are not of the later and of the state of the	Calendar:	SEC. EE.S. Wine on inequality of the chemical strain problems of second strains of the contract of the contrac
Thursday, November 1st	Friday, November 2 nd	Monday, November 5th
 Focus: Equations (adding and subtracting) IXL Topic: Z.1, Z.2, Z.6 	 Focus: Equations (adding and subtracting) IXL Topic: Z.1, Z.2, Z.6 	 Focus: Equations (multiplying and dividing) IXL Topic: Z.1, Z.2, Z.6
Tuesday, November 6th	Wednesday, November 7th	Thursday, November 8th
Teacher Work Day- Election Day! (Equations Practice)	 Focus: Equations Practice IXL Topic: Z.1, Z.2, Z.6 	 Focus: Functions (Input Output Tables) IXL Topic: BB.5, BB.8, BB.10
Friday, November 9th	Monday, November 12 th	Tuesday, November 13th
 Focus: Functions (writing rule from table and graphing) IXL Topics: BB.5, BB.8, BB.10 	 Focus: Inequalities (review and writing inequalities for scenarios) IXL Topics: AA.1, AA.2, AA.4 	Focus: One Step Inequalities and Graphing IXL Topic: AA.1, AA.2, AA.4
Wednesday, November 14th	Thursday, November 15th	Monday, November 26th
 Focus: One Step Inequalities and Graphing IXL Topic: AA.1, AA.2, AA.4 	Review Day © (Ms. Rankin at Meeting)	Focus: Inequalities wrap up IXL Topic: AA.1, AA.2, AA.4
Tuesday, November 27th	Wednesday, November 28th	Thursday, November 29th
 Focus: Study Guide IXL Topic: AA.1, AA.2, AA.4 	 Focus: Review IXL Topic: AA.1, AA.2, AA.4 	Focus: Unit Test IXL Topic: AA.1, AA.2, AA.4
Appending a for	will a province and additional and additional	www.h. rells we more about the rela

*If Lost, Please Return to: Ms. Rankin (Room-F106)

Standards:

MGSE6.EE.5 Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in specified set makes an equation or inequality true.

MGSE6.EE.6 Use variables to represent numbers and write expressions when solving a realworld or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.

MGSE.6.EE.7 Solve real-world and mathematical problems by writing and solving equations of the form x + p = q and px = q for cases in which p, q and x are all nonnegative rational numbers.

MGSE.6.EE.8 Write an inequality of the form x < c or x > c to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form x < c or x < c have infinitely many solutions; represent solutions of such inequalities on number line diagrams.

MGSE6.EE.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another. a. Write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. b. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.

Essential Questions:

- How is an equation like a balance? How can the idea of balance help me solve an equation?
- What strategies can I use to help me understand and represent real situations using proportions, equations and inequalities?
- How can I write, interpret and manipulate proportions, equations, and inequalities?
- How can I solve a proportion and an equation?
- How can I tell the difference between an expression, equation and an inequality?
- How are the solutions of equations and inequalities different?
- What does an equal sign mean mathematically?
- How can proportions be used to solve problems?
- How can proportional relationships be described using the equation y = kx?
- How can proportional relationships be represented using rules, tables, and graphs?
- How can the graph of y = kx be interpreted for different contexts?
- How does a change in one variable affect the other variable in a given situation?
- Which tells me more about the relationship I am investigating, a table, a graph or a formula?

Vocabulary Words:

Addition Property of Equality: Adding the same number to each side of an equation produces an equivalent expression.

• Constant of proportionality: The constant value of the ratio of two proportional quantities x and y; usually written y = kx, where k is the constant of proportionality. In a proportional relationship, y = kx, k is the constant of proportionality, which is the value of the ratio between y and x.

Solving One-Step EQUATIONS

- Dependent variable- A variable that depends on other factors. For example, a test score could be a dependent variable
 because it could change depending on several factors such as how much you studied, how much sleep you got the night
 before you took the test, or even how hungry you were when you took it.
- Direct Proportion (Direct Variation): The relation between two quantities whose ratio remains constant. When one variable increases the other increases proportionally: When one variable doubles the other doubles, when one variable triples the other triples, and so on. When A changes by some factor, then B changes by the same factor: A=kB, where k is the constant of proportionality.
- Division Property of Equality: States that when both sides of an equation are divided by the same number, the remaining expressions are still equal
- · Equation: A mathematical sentence that contains an equal sign
- Independent variable: A variable that stands alone and isn't changed by the other variables you are trying to measure. For example, someone's age might be an independent variable.

Inequality: A mathematical sentence that contains the symbols >, <, ≥, or ≤.

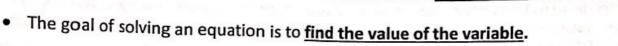
- Inverse Operation: A mathematical process that combines two or more numbers such that its product or sum equals the identity.
- Multiplication Property of Equality: States that when both sides of an equation are multiplied by the same number, the remaining expressions are still equal.
- Proportion: An equation which states that two ratios are equal.
- Solution: the set of all values which, when substituted for unknowns, make an equation true.
- Substitution: the process of replacing a variable in an expression with its actual value.
- Subtraction Property of Equality: States that when both sides of an equation have the same number subtracted from them, the remaining expressions are still equal.
- Term: A number, a variable, or a product of numbers and variables.
- Variable: A letter or symbol used to represent a number or quantities that vary.



18) K + 5 depilor 14 2 16 L

Solving One-Step EQUATIONS - Addition/Subtraction





We do this by <u>isolating</u> the variable on one side of the equation using <u>Inverse Operations!</u>

 Inverse operations "undo" each other 	•	Inverse	operations	"undo"	each	other
----------------------------------------------------------	---	---------	------------	--------	------	-------

Inverse of addition?

Inverse of subtraction?

Inverse of multiplication?

Inverse of division?

Examples:

John has x apples. If he adds 5 apples to his Maddie has x dollars. After spending \$90 on pile, he will have 8 apples.

'hat is the value of x?

Write an equation: x + 5 = 8

$$x = 3$$

a purse, she will have \$45. What is the value of x?

Write an equation: x - 90 = 45

$$x = 135$$

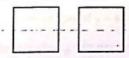
Answer: John had 3 apples before he added Answer: Maddie had \$135 before she bought

to his pile.

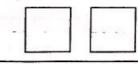
the purse.

Let's Practice!

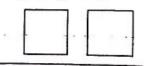
1.
$$x + 2 = 10$$



2.
$$y - 8 = 15$$



3.
$$a + 9 = 2$$



$$a + 0 =$$

Check:

Check:

Check:

Solve

- (a) x + 7 = 18
- 2) a 15 = 22
 - 3) 83 = y 17

4) c-3=6

5) x + 8 = 18

6) y-5=4

7) 6 + z = 10

8) p-5=15

9) 4 + m = 12

- 10) g + 44 = 50
- 11) x-9=2
- 12) a + 10 = 17

13) y-4=19

14) b-17=12

15) 3 = d + 2

16) i + 13 = 27

17) y-4=6

18) x + 5 = 8

19) x-4=9

- 20) 24 = n + 13
- 21) d-9=11

Solving One-Step Equations: Addition and Subtraction

You must show your work to get credit! Check your answer.

1)
$$y+6=20$$

2)
$$x-10=12$$

3)
$$12+z=15$$

4)
$$2+n=16$$

5)
$$a+4=14$$

6)
$$m-5=10$$

7)
$$4 + b = 30$$

8)
$$10+c=25$$
 9) $x-60=20$

9)
$$x-60=20$$

10)
$$g-16=4$$

5 + 2 = E (EL = 3-

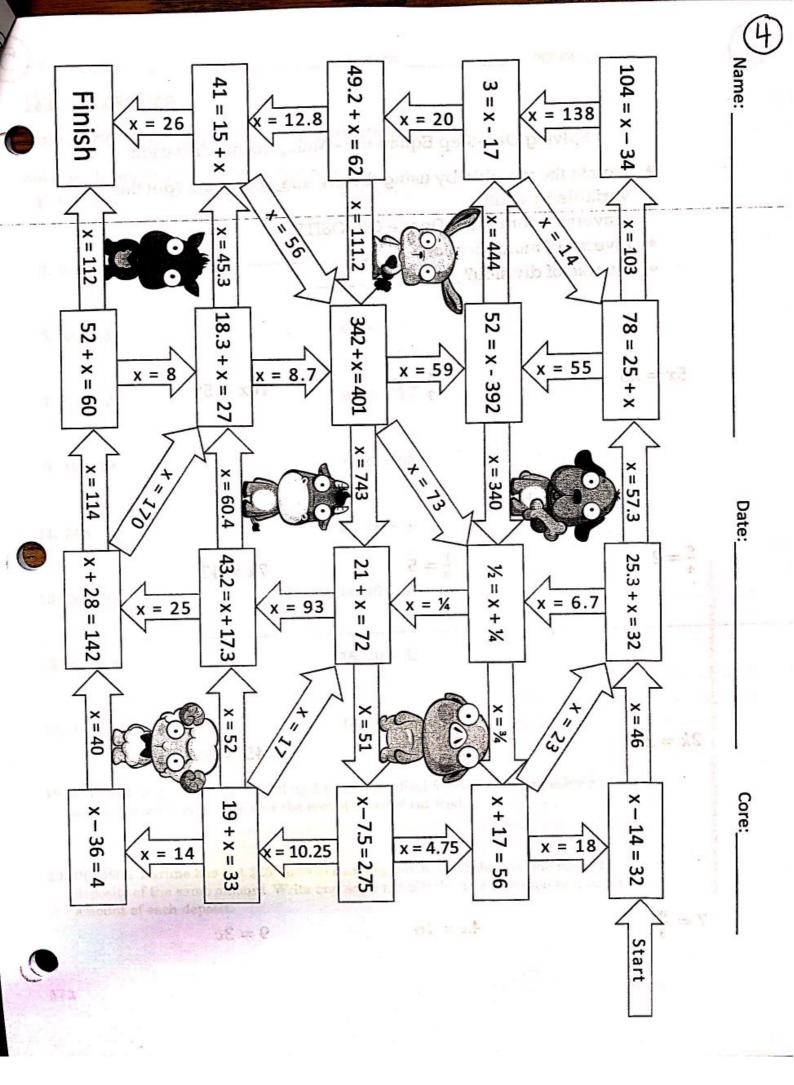
11)
$$x-15=20$$
 the purse.

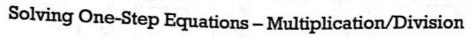
12)
$$w+14=18$$

13)
$$r - 18 = 27$$

14)
$$13 + k = 25$$

15)
$$f - 16 = 34$$





- Isolate the variable by using the <u>inverse operation</u>. (get the variable by itself)
 - *Inverse operation = Do the OPPOSITE
- Inverse of multiplication?
- Inverse of division?

$$5x = 25$$

$$\frac{x}{3} = 6$$

$$10x = 50$$

$$\frac{e}{4} = 2$$

$$\frac{y}{9} = 5$$

$$7x = 42$$

$$2k = 22$$

$$\frac{w}{7} = 63$$

$$45 = 9c$$

$$7 = \frac{w}{3}$$

$$4x = 16$$

$$9 = 3c$$



Skills Practice

Skills Practice

olve and Write Multiplication Equations hollswas noisivid airW take syloc

Solve each equation. Check your solution.

1.
$$3a = 9$$

$$2.7b = 14$$

3.
$$9c = 36$$

4.
$$8c = 16$$

5.
$$3x = 18$$

6.
$$7n = 7$$

7.
$$10g = 20$$

8.
$$3k = 15$$

9.
$$4h = 32$$

10.
$$27 = 9h$$

11.
$$24 = 12i$$

12.
$$28 = 7y$$

13.
$$36 = 9y$$

14.
$$40 = 0.5r$$

15.
$$5 = \frac{1}{5}w$$

16.
$$50 = 5p$$

17.
$$0.25f = 10$$

18.
$$\frac{3}{4} = \frac{1}{4}u$$

- 19. CAT FOOD A grocery store is selling 6 cans of cat food for \$3. Write and solve a multiplication equation to find the cost of a can of cat food.
- 20. DEPOSITS Earline has put \$250 into her savings account. To do this, she made 10 deposits of the same amount. Write and solve a multiplication equation to find the amount of each deposit.



选出 等

Skills Practice

Solve and Write Division Equations notice and white state base

Solve each equation. Check your solution.

1.
$$4 = \frac{r}{2}$$

2.
$$6 = \frac{j}{2}$$

3.
$$7 = \frac{k}{2}$$

4.
$$\frac{p}{4} = 9$$

5.
$$\frac{h}{4} = 8$$

6.
$$\frac{s}{5} = 6$$

7.
$$10 = \frac{r}{5}$$

8.
$$11 = \frac{a}{3}$$

9.
$$12 = \frac{q}{4}$$

10.
$$\frac{p}{5} = 9$$

11.
$$\frac{y}{7} = 10$$

12.
$$\frac{b}{12} = 10$$

13.
$$12 = \frac{r}{5}$$

14.
$$11 = \frac{d}{11}$$

$$\sqrt{1} = 82^{\circ} \times 15.9 = \frac{r}{13}$$

16.
$$\frac{b}{15} = 2.5$$

17.
$$2.2 = \frac{c}{14}$$

18.
$$0.5 = \frac{d}{10}$$

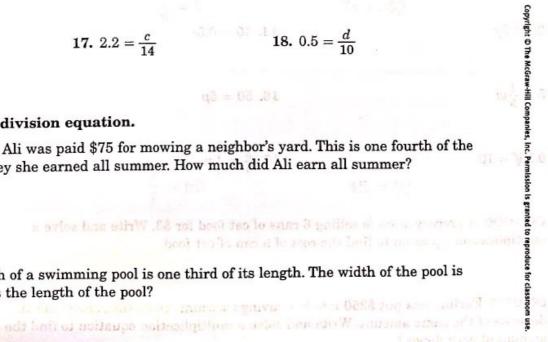
Write and solve a division equation.

19. LAWN MOWING Ali was paid \$75 for mowing a neighbor's yard. This is one fourth of the amount of money she earned all summer. How much did Ali earn all summer?

16, 50 = 5p

A revery warm a selling 6 rans of cet food for \$3. Write and solve a

20. POOL The width of a swimming pool is one third of its length. The width of the pool is 15 feet. What is the length of the pool? 20. or the restaurance put \$250 arts by a wangs a canat to me the





Color By Number: One Step Equations with Multiplication & Division

Name:

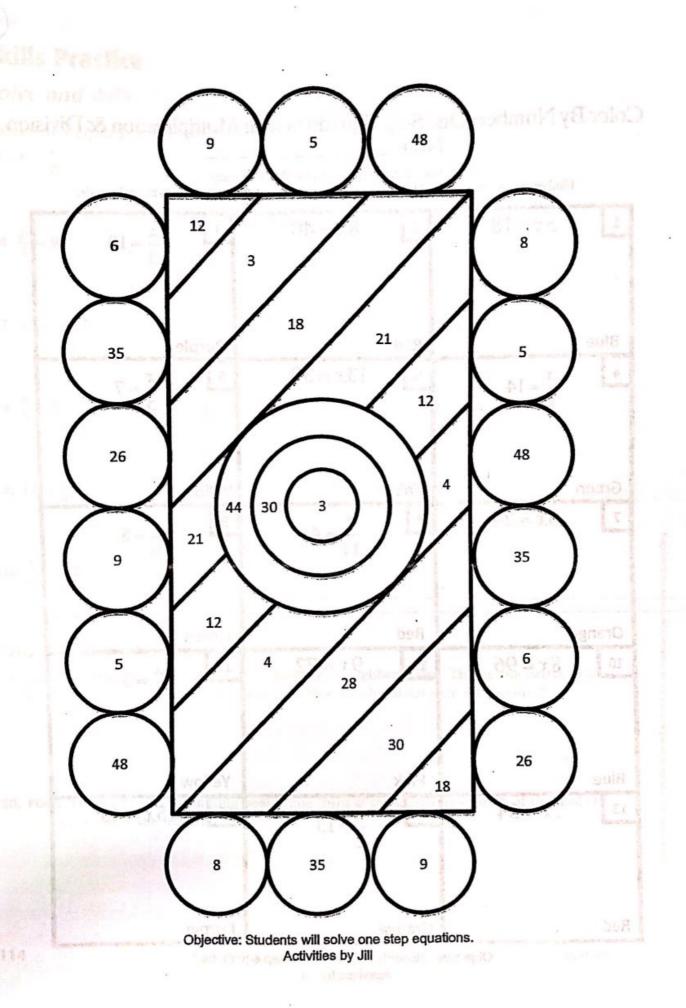
Solve each problem. Show all work clearly.

Find each answer on the coloring page and color symmetrically according to the color code.

1 3	2-10	2 8x = 40	3 r
	3x=18	2 02-40	$\frac{x}{3} = 10$
1	- 4 A	1 1 1	
	-		The state of the s
Blue	15 B X V	Red	Purple
	A lot V		
4	$\frac{x}{2} = 14$	5 13x = 39	$\frac{x}{5} = 7$
	2	and the same of th	
1	3 812	W. James S.	20 1
Green	A	Pink	Yellow
	6x = 24	The second secon	
- 7	N.	$\frac{x}{11} = 4$	$\frac{x}{6} = 8$
Ē	1	A Comment	
	Para esta	The same	
Orange	1	Red	Green
	8x = 96	11 $9x = 72$	$\frac{x}{7} = 3$
_ /		24 g 28	7 7
1 0 6	1	14 6	
1		30	1 0 1
Blue	至 图 / 。	Pink	Yellow
13	3x = 54	$\frac{x}{x-13}$	15 $5x = 45$
10 S S	28/	$\frac{x}{2} = 13$	
7 9 6	图 如	18 ml 185 ml	
		I have to	Marine Jack
Red	5	Orange	Purple

Objective: Students will solve one step equations.

Activities by Jill



Question #1

Error Analysis – ONE-STEP EQUATIONS

Read the word problem. Look at the students work and solution. Identify the error and describe it. Solve the problem correctly. Then share a strategy this student could use to prevent the same error in the future.

The equation $8\hbar=200$ can be used to find how many hours h a person needs to work to earn \$200 at \$8 per hour. How many hours does a person need to work to earn \$200?

Incorrect Work/Solution	Identify and Explain the Error
8h = 200 200 200	SUBLEGE SHEEK
h = 0.04	
A person needs to work 0.04 hours.	
Correct Work/ Solution	Share a Strategy

							_
			-	- 1			
		- 1		7		1	
				55			
						1	
				2			
		3	5	9		1	
			3				
	1	100	15	195			
		57.7	27	2			
	1						
		1000	U.	mim		-	
		*-		-			
	1	ď.	15	65		7	
	1	No.	-1			1	
		-12	memy camings area	Pare 1			
		5	-	1			
		-	4			8	
		1		YTHIS			
		-	MODE	=			
		9776	10	L)			
		5		T.			
	1	93	12	-6	1	1	
		73.				3	
	1		103	212	E	1	
	1		6.5		E		
			1474) 1417)	=		2 -	
	1		1000		Site	1	
			200	o d	2		
8	1						-
			-			d	
			108	MASS.	10	Tall light	
	-1		108	UN,50	10		
	Sec.		ca squ	STANDER	10		
			ca squ	STANDER	10	900, 2014	Selle S
	2		dition ad-	STANDER	10	Pauc 2016	
	S Mek		addition equ	STANDER	10	Mary Bull 1st	
	d to Mck		n addition eq.	paded minutes	CAROL TUD CALLS SEL	part and hears	
	2	OB	en addition eq.	esturum beback	10	part and here's and	
	2	000	ps moitibbs ns s	esturum beback	or the contest the management	pur, one hery areas	
	2	CINTION	ps maidibbs ns svis	escurios debacinare	or the code; The Parts Star	pur and hear stable	
	prioled a	Summon	ps noitibbs ns svipa	don violatical minutes	THE THE CHEST THE CHEST SEL	buck time flery eithbook	
	enoled tu	Political States	d solve six addition ed	a downlastical minutes	THE THE CHEST THE CHEST SEL	part, and hencetable offs	
	probed tret	Political States	ps solve six addition eq.	estunia bebasin web & 2	engine of thesit per sub Sec	tion, and her established onto	
5	probed tret	Political States	and solve an addition eq.	estunian bebasilmareb 8.38	resigned in Lowest the Paul Str.	tion, and her established onto	
5	probed tret	Seould Summon	ps moitibbs ns svioz bas st	esturin bebaulturob & 282	our near grave on the owest, two rounds State	page and the vierbhook off to med	
	probed tret	Seould Summon	ps maidibbs as svips bas sti	estyrim beback web £ 281 99	The remaining rate or the country of the State State	page, and they eithborde educe work	
5	probed tret	acr sentidentations	Ps moitibbs ns solve bas stirM	estudin bebackureb & 281 9vs	לו לפיול בב של בגב בין בייפול וליי שידום פויי	in term of the steadantakenh and on	
	probed tret	acr sentidentations	Write and solve an addition eq.	estunim bebach nob 8.281 evan	לו לפיול בב של בגב בין בייפול וליי שידום פויי	the Year of the steadable Arch Such to	
	probed tret	correct world/publication	Write and solve an addition eq.	estunim bebach nob 8.281 evan	this student conduct to event the same ger	the Year of the steadable Arch Such to	
	probed tret	acomunation of the second	Write and solve an addition eq.	estunim bebach nob 8.281 evan	this student conduct to event the same ger	part, time from etablicate and to most immittens a	
	probed tret	piconact prout guinnos.	Sick? Write and solve an addition eq.	estunian bebasin nob 8.282 evan half	this student conduct to event the same ger	para, time flery ethicked end to work invitants the	
	probed tret	piconact prout guinnos.	ps moitibbs as solve and stirly Skills of	estunian bebaalmareb & Read even halfi h	year, the student rending for in the west the reins sin	para tine flew attached to each time less than	
	probed tret	piconact prout guinnos.	to Sick? Write and solve an addition eq	and Rick have Less & downloaded minutes	stroyed, the strigent rengtive in the east, the route sin	para tine flew attached to each time less than	
	probed tret	piconact sent goingon	ps notitibbs na solve and stirly White an	y and Rick have Let 3 downloaded minutes	as shorted, the strigent reading to the west the rates suc	part, time from extraorde edución de formations especialles	
	enoled tu	Ancomact crould/publication	penditions of the sand solve an addition ad	y and Rick have Let 3 downloaded minutes	the a strategic (this student bend use to prend the word the wing gir	part, time from extraorde edución de formations especialles	
	product and executes to return ad	piconact sent goingon	ps moitibbs as serves and serve shall of pro-	and Rick have Less & downloaded minutes	as shorted, the strigent reading to the west the rates suc	page time flower etasks also seed to work method and soon set	

©Exceeding the CORE

Date

Name (s)

Error Analysis – ONE-STEP EQUATIONS

Read the word problem. Look at the students work and solution. Identify the error and describe it. Solve the problem correctly. Then share a strategy this student could use to prevent the same error in the future.

belong to Rick? Write and solve an addition equation to find how many minutes belong to Rick? Henry and Rick have 265.3 downloaded minutes of music. If Henry has 112 minutes, how many

r = the number of minutes that belong to Rick.	
112 + r = 265.3	

	S86529498	
	1000	
	5500000	
	20000	
	200	
	200	
	130000	
	POST CONTRACT	
	12392	10
	\$300 A	21
	22000	
	100	
	1000	
	356.20	
	200	
	(A) (A)	
	DO.	
	36 113	
	Sh 6	
	CO	
	2	
	S	
	Street Say	
	Section 1	
	iare a Stra	
	Œ	
	80	
١	S	
	The state	
	Will street	
	11-60	
	50 Sep.	
	23315	
	20202	
	2500	
	32.55	
	10 Sec. 1	
	3205	
١	Secretary.	
i	346.35	
	TO SEE	
	A THE	
	1761-07000952-1	
	THE REPORT OF	
	1000	
	100X 100X 100X 100X 100X 100X 100X 100X	
		-
		y and
		, and
		-
		-
		-
	u	-
	uo	-
	ion	gard .
	tion	-
	ution	
	lution	
	olution	
	Solution	and and
	Solution	part of the same o
	/ Solution	and and
	k/ Solution	
	rk/ Solution	general designation of the second
	ork/ Solution	
	'ork/ Solution	
	Work/ Solution	
	Work/ Solution	
	: Work/ Solution	
	t Work/ Solution	grand and a second
	ct Work/ Solution	
	ect Work/ Solution	and a second
	rect Work/ Solution	and the same
	rrect Work/ Solution	
	orrect Work/ Solution	
	Correct Work/ Solution	
	Correct Work/ Solution	
	Correct Work/ Solution	
	Correct Work/ Solution	
	Correct Work/ Solution	
	Correct Work/ Solution	
	Correct Work/ Solution	
	Correct Work/ Solution	
	Correct Work/ Solution	
	Correct Work/ Solution	
	Correct Work/ Solution	
	Correct Work/ Solution	
	Correct Work/ Solution	

Rick has 377.3 minutes.

r = 377.3

Question #3

Date

Class

Error Analysis – ONE-STEP EQUATIONS

Read the word problem. Look at the students work and solution. Identify the error and describe it. Solve the problem correctly. Then share a strategy this student could use to prevent the same error in the future.

Charlotte's ice skates cost \$30.45 less than her skateboard. Her ice skates cost \$95.28. How much did her skateboard cost? Write and solve a subtraction equation.

b = the cost of the skateboard	int in the second
b -30.45 = 95.28	Contract of the second
- 30.45 - 30.45	
b = 64.83	
10 11	
The skateboard cost \$64.85.	

©Exceeding the CORE

Error Analysis - ONE-STEP EQUATIONS

Date

Class

Read the word problem. Look at the students work and solution. Identify the error and describe it. Solve the problem correctly. Then share a strategy this student could use to prevent the same error in the future.

Karen is buying ribbon to make hair bows. She wants to divide the ribbon into 6.2 inch pieces for 15

equation to find the length of ribbon Karen should buy.	Identify and Explain the Error		
bows. Write and solve a division equation to fi	Incorrect Work/Solution	r = the length of ribbon Karen should buy.	

	-	
*	-1	
	2	
	9	
	_	
	. -	
	~	
	S	
	-	
	11	
	01	
	2	
	9	
	. -	
	<u> </u>	
	-	

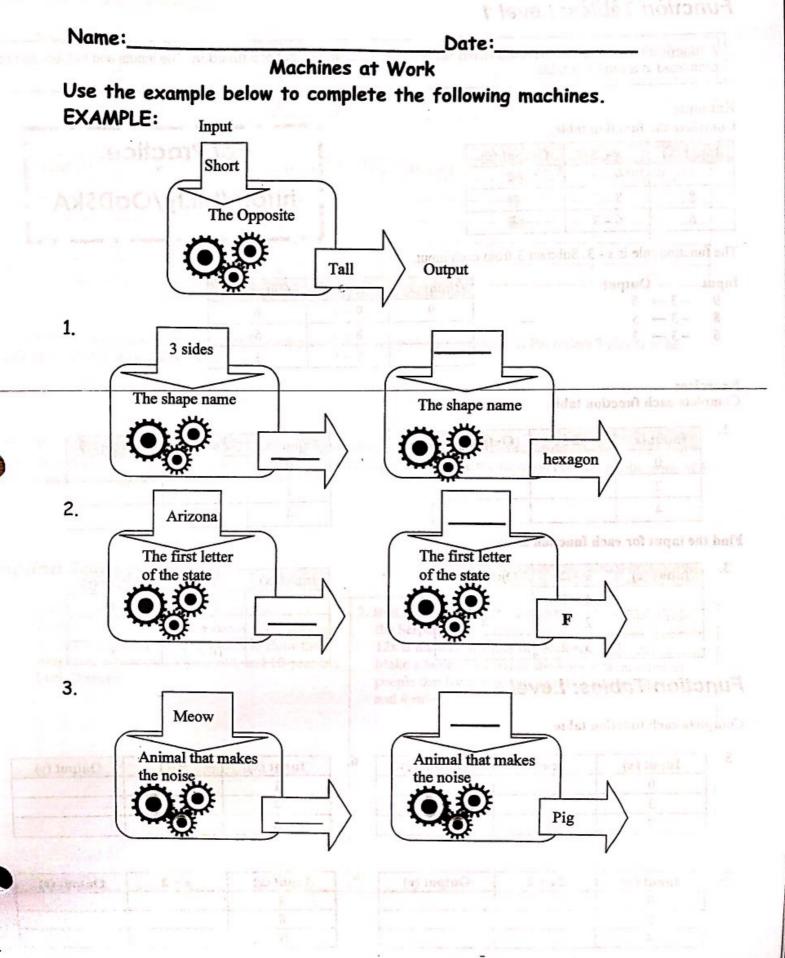
$$\underline{\Gamma}(\div 6.2) = 15 (\div 6.$$

Correct Work/Solution

Share a Strategy

©Exceeding the CORE

Student Resource 2





Function Tables: Level 1

A function rule describes the relationship between the input and output of a function. The inputs and outputs can be organized in a function table.

Example

Complete the function table.

Input (x)	-x-3	Output (v)
9	9-3	
8	8-3	额值
6	6-3	

For Practice:

http://bit.ly/OaDSkA

The function rule is x - 3. Subtract 3 from each input.

-	-			
- 1	n	n	ш	T

$$8 \quad -3 \rightarrow 6$$

 $8 \quad -3 \rightarrow 5$

$$6 \quad -3 \rightarrow 3$$

Input (x)	x=3	Output (y)
9	9-3	6
8	8-3	5
- 6	6_3	2

Exercises

Complete each function table.

1.

Input (x)	2 <i>x</i> •	Output (y)
0	Transfer I	1 1
2		
4		

2.

Input (x)	4+x	Output (y)
0	9,00	
1		
4	Rhowith	

Find the input for each function table.

3.

Input (x)	x+2:	Output (y)
	1 + 2	3 0
	2+2	4
	5+2	7

4

Input (x)	$x \div 2$	Output (y)
Separate Separate	2 ÷ 2	20 1 1
	6 ÷ 2	3
W. P. To	10 ÷ 2	5

Function Tables: Level 2

Complete each function table.

5.

Input (x)	x+6	Output (y)
0	A TIME	Jake Jake
3	NE E IT O	TATAME !
7	Pr 81.1	1830-0

6.

Input (x)	x-1	Output (y)
1	JAN . my	4
4	1.5	
8	51/2/17	

7.

Input (x)	3x+2	Output (y)
0		
2		
4		

8.

Input (x)	x ÷ 2	Output (y)
4		
8		
10		

,				
,	1		AE	
	NIA	۱n	ш	=

DATE

PERIOD



Find the input for each function table.

Tubut (x)	x ÷ 4 Output (y)
The second second	1
	2
	4

Input (x)	x ±2	Output (y)
abellion to Tra	Parameter until	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	ARTEM OF U.	3
		5

1 Input (x)	x-3 Output (y)
11	0
	2
	3
a contract to	5
	8

Input(x)	3x+3	Output (v)
mital occuss		3
		6
		9
ved their att	PR 1,304 Se 19	12
save or safe	plan II she see	15

13. FOOD A pizza place sells pizzas for \$7 each plus a \$4 delivery charge per order. If Pat orders 3 pizzas to be delivered, what will be his total cost?

14. MOVIES A store sells used DVDs for \$8 each and used videotapes for \$6 each. The function rule 8d + 6v can be used to represent the total selling price of DVDs d and videotapes v. Then use the function rule to find the price of 5 DVDs and 3 videotapes.

Function Tables: Level 3

- DRAGONS The Luck Dragons that live in the Enchanted Forest weigh 4x pounds when they are x years old. Make a table of values to show the weights of 6-year-old, 8-year-old, and 10-year-old Luck Dragons.
- 2. ROLLER COASTER Twelve people are able to ride the Serpent of Fire roller coaster at one time. The rule 12x is the total number of people that ride after x rides. Make a table of values to show the total number of people that have been on the roller coaster after 1, 2, 3, and 4 rides.

FORD A prize place of a pieres for \$7 cars place \$4 where charge net order, if Per value J pieres.

- 2. MOVIES At a local movie theater, it costs each student \$5 to see a movie. The rule 5x represents the total amount of money the theater collects from x students. Make a table of values to show the total amount of money the theater collects from 2, 5, and 6 students.
- 4. RABBITS The Friendly Critters Pet Store keeps 3 rabbits in each cage. The rule 3x represents the number of rabbits that x cages can hold. Make a table of value to show how many cages it takes to hold 9, 15, and 18 rabbits.

- 5. BEADS A bead shop sells glass beads for \$7 each minus a \$2 discount. The rule 7x 2, where x is the number of glass beads, can be used to find the total cost of x beads. Make a table of values to show how much it costs to buy 5, 6, and 9 glass beads.
- 6. Use the rule given in Exercise 5 to find the selling price of 15 glass beads.

A ROMANN COAST AND It also remain and able to rain the Serpens of the remaining and the Serpens of the remaining and the remaining people that have been originary but an edding the remaining and 4 ridge.

L. PERL, W. Tim Linck Dregons that live in the

in the start in year would be potents when they are

Regal Movies AMC Cinema Movie Pass Depending on	Pass	\$10 per movie \$15 per year plus \$90 per year for			
Movie Pass					
		\$90 per year for	1		(3
			unlimited mo	ovies	23
Regal Movie F	Plus:		1 021	8ly is 6 a self	MIDN /
Regal Movie F	lus:		7 02 1	By ISOM SCH	JA1017/7
Regal Movie F AMC Cinemas	+		7 02 1	Bry 15 OH SCH	MIDE /

					2-100	-			1			_		-
							+	+	+	-		-	-	1
	-	211	. 1.			+	+	\dagger	-	-	+	+	-	+
														1
10 20	пë	1 7,1	1213	le	9 50	-	4 6	\vdash		-	-			1
2 1 10	1 10 5	13	υY	154.	ing in	1 7.1	La		+			10	115	
										1	1.5	Ror		25
					_	+	-		-					
di nac	- W- C	E 31-	28	DA I	150	15.1	ψą		L,	17	tin.			Pa
						7	191	N	il in	30	1	a la	(1961	n's
				+	-							-	-	
							-			ť.	- 2	100	Œ!	174
				+								+	4	
						-		Mr. M. M. Marrie		*.0"	čOr	91110	-11	A
														*
			113		1 2 3 1	1 1 /2		7	18. mar		-	1		24
vie Pos	oM.		12-50-4		10	MA						ho	0.9	
25170	M	120	5					13	03			areo/	4	
0				1	0					e the				
		All was a series of the series									The state of the s	The state of the s	The second secon	

	/	-	2
1	2	1	1
(1		J
,		_	

Name	a mathematical sentence	indicating that two qu	antities are not equal.
and the second second	Symbols:		Free add.
<	≤ n	1 0 gr >	2
Less than Is smaller than Is less than Below	Less than or equal to Maximum At most Not more than Is not greater than	Greater than Is more than Is greater than Is larger than Above	Greater than or equal to Minimum At least Is not less than Not smaller than
368			
f + 2 < 9 Is 8 a solu	numbers is a solution (antion?	3. 12 ≤ 18-v ls 6 a s	Olution?
f + 2 < 9 Is 8 a solu	tion?	3.12 ≤ 18-y Is 6 a s	olution?
f + 2 < 9 Is 8 a solu	tion?	3.12 ≤ 18-y Is 6 a s	olution?
f + 2 < 9 Is 8 a solu n-3 > 6 Is 9 a solut	tion?	3. 12 ≤ 18-y Is 6 a s	olution?
f+2<9 8 a solut	on?	3. 12 ≤ 18-y Is 6 a s 4. 17 ≥ 11 + x Is 8 a	olution?
f+2<9 Is 8 a solut	on?	3. 12 ≤ 18-y Is 6 a s	olution?

wolse

Graphing Inequalities Notes:

There are 3 important pieces to graphing an inequality:

1.

2.		< and >	≥ and ≤
Greater than or equ	100	migeral I	Tisup tructer.
roundalt4	11671		2.77

A least A

Words	Abaye	Practice Chart:	
the state of	Algebraic	Graph	Possible Solutions
B is greater than 6	Sharing management		of actions by
J is fewer than 17		the fallowing ourstance as a course of the	Which (
J is lewer than 17			
	< L3 y Is 6 b s.	ST E Sacintions State 12	
	X > 3		
Solimbo	sal x+lis	ri 🗲 📙 📙 I Indicita 🔰 i	< 8-n S
	G ≤ 52		
		< 	-4-
<i>-</i> • •		-2 0 2 4 6 8 10 12 14	
Part Di Choose statement.	the carrier spin	n in a site of convectivy complete this	
R is no more than 26	es to the move:	15 times in a year, the least expendice is the	
19	s.d. Han	<	3
Section 1900 Graph	insive is	-5 -4 -3 -2 -1 0 1 2 3 4 5	



Inequality Practice: Real World Problems

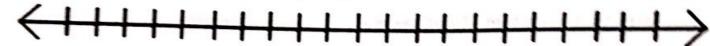
Name:	Period:
Urite an inequality for each situation,	then represent on a number line. Many of those set I
1. Jorge spent more than \$50 at t	
	The development of the continuous and continuo
	+++++++++>
2. Water freezes at any temperatur	at or below 32° F: Inequality:
2 boase freezes as any semperature	e ut of pelou 32 1 mequanoy.
<++++++	
<++++++	+++++++++
3. The speed limit on Holcomb Bridg	e Rd is 45 mph. Inequality:
< 1111111	
	is. To stands for people, fewer than 14 people attended the nur
11.96+36 b=	+++++++++
4. At least 150 people have to sign	up for the Valentine's Dance· Inequality:
	++++++++

Part III

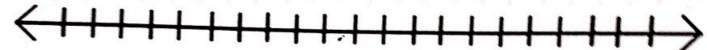
Write an inequality for each situation, then represent on a number line.

example: If p stands for people, there are at least 15 people in the waiting room. Answer: $p \ge 15$

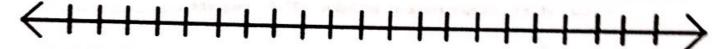
If p stands for people, the tram attendant will allow no more than 60 people on the tram.



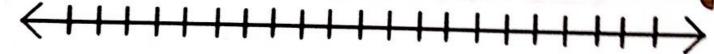
2. If g stands for gallons of gas, there are at most 10 gallons of gas in the tank.



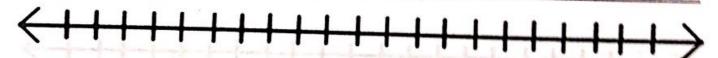
3. If y stands for yards of fabric, there is at least 10 yards of fabric left.



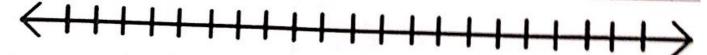
4. If p stands for people, no more than 220 people are in the theater.



5. If e stands for eggs, there are at least a dozen eggs left.



6. If p stands for people, fewer than 14 people attended the meeting.



Unit 4 Study Guide: Equations and Inequalities

Part 1: One Step Equations

13. m ÷ 9 = 5

14. $q \div 4 = 12$

Identify the solution of each equation from the list given. Circle the solution.

1.
$$s + 12 = 17$$
; 5, 6, 7

2.
$$44 = t - 10$$
;

3.
$$4r = 40$$
:

4.
$$28 \div w = 7$$
; 3, 4, 5

Solve each equation. Check your solution.

5.
$$4+k=11$$

6.
$$8w = 80$$

7.
$$a+6=11$$
 $a=$ _____

8.
$$17 = 9 + e$$

9.
$$24 = j - 34$$

10.
$$k - 12 = 4$$

11.
$$9b = 36$$

15. Fun Time Roller Coasters charges \$6 per ride. Joe spends \$54 on rides.

Write an equation for each situation and solve it.

16. Bonnie has 27 more cans than Jackie. If she has 56 cans, write and solve an equation to find how many cans Jackie has.

17. Cornelius is saving money to buy a jacket that costs \$47. He has already saved \$25. Write and solve an equation to find how much more money Cornelius needs to save.

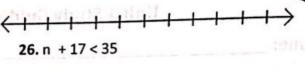
Cal es Lint w ton 827 pounds or less.

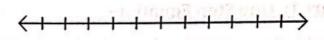
18. Keshav has \$250 in his account. This is \$75 more than his brother Nalin has in his account. Write and solve an addition equation to find the amount of money in Nalin's account.

Part 2: Inequalities in append ban anciliand (

Write an inequality for each sentence.

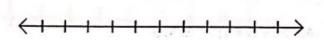
 More than 40,000 fans attended the opening football game at the University of Florida.





27. 6x ≥ 138

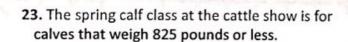
- 20. Her earnings were no more than \$86.
- 21. A savings account balance is now less than \$550.

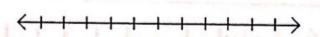


3. 20 = 90.

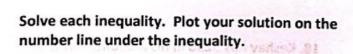
6. CW = 80

22. The number of club members is at least 25.



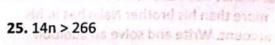


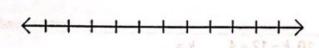
24. The minimum deposit for a new checking account is \$75.



and sign to find the amount of money in

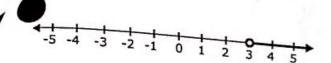
Main's account.



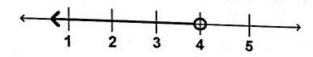




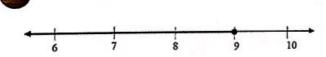
Write the inequality shown by each graph:



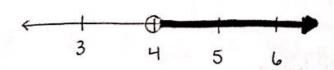
31. Inequality:



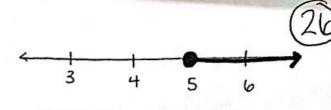
32. Inequality:



33. Inequality:



34. Inequality:



35. Inequality:

Part 3: Functions

Write an equation for each function table and find the value for the missing output.

36. Equation:

Input (x)	Output (y)
5	0
6	1
7	2
8	3
9	

37. Equation:

Input (x)	Output (y)
2	14
	16
	18
8	20
10	

38. Equation: _____

Input (x)	Output (y)		
4	0		
5	1		
6	2		
7	3		
9			

39. Equation:	

Input (x)	Output (y)		
1	11		
2	22		
3	33		
4	44		
6	•		

Practice Free Response

Mark has been earning money by mowing his neighbors' lawns. His goal for the summer is to have \$1,200 in his savings account. If he charges \$20 per lawn each time he mows, how long will it take him to reach his goal?

Step 1: Fill in the function table below:

Lawns Mowed	0			p = 11
Amount in Savings	made martist to the	5,00 pS		

Step 2: Write an equation to show the relationship between the number of lawns he mows and how much is in his savings account.

Step 3: How many weeks will it take Mark to reach his goal?