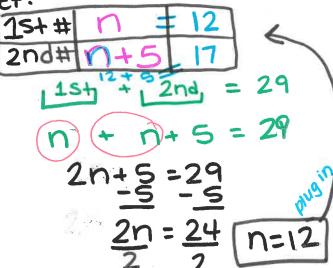
Unit 4: Writing & Solving Linear Equations

Math 8R

4-1 Finding TWO Unknown Numbers

- Create a "Let Statement" Chart
- Box operation keywords and translate into equation. (2)
- (3) Solve the equation for the missing values!
- (4) Did you answer the guestion?
- One number is 5 larger than another. The (1) sum of the numbers is 29. Find the two numbers.
 - The first number is four times the (2) second number. Their sum is 150. Find the numbers.

Let:



- 164: 15+# 2nd# 2nd
- The second number is seven more than (3) the first. If twice the larger is 22 less than four times the smaller, what are the two numbers?
- The second number is eight less than (4) three times the first. Their sum is 136. What is the smaller number?

164:

$$\frac{1}{1}$$
 $\frac{1}{1}$ $\frac{1}$

Let:
$$15+\pm 100$$
 $2nd \pm 3n - 8$ 100 $3(36) - 8$

2(larger) = 4(smaller) - 22

$$2(7+n) = 4n-22$$

$$14+2n = 4n-22$$

$$-2n - 2n$$

$$14 = 2n-22$$

$$+22$$

$$\begin{array}{r}
 15+ + 2nd &= 136 \\
 13-8 &= 136 \\
 4n-8 &= 136 \\
 4n-8 &= 136 \\
 4n-8 &= 136 \\
 4n &= 144 \\
 4n &= 144 \\
 4n &= 144
 \end{array}$$

(5)	The larger of two numbers is seven times	(6)	One number is 20 more than another
	the smaller. If the sum of the two		number. Twice the larger increased by 15
	numbers exceeds their difference by 20,		is 5 less than four times the smaller.
	what are the two numbers?		Find the value of the larger number.
6000	11 1 10	15+	1 130 The larger # 50
5mal			
Larg	e 70 7(10) 70	2nd	n+20 50
_	72 2 20	21	n+20)+15 = 4n-5
/	n+n=7n-n+20	20	
	8n = 6n + 20	2	2n+40+15 = 4n-5 n=30
	$\frac{-67}{2}$ $n = 20$ $n = 10$		2n+55 = 4n-5
(7)	One number is 3 less than twice another	(8)	The sum of two numbers is 84. The
(/)	number. The sum of the numbers is 21.	(0)	larger of the two numbers is twelve more
			than the smaller number. What are the
	Find the numbers.		two numbers?
15+	n 8	-	10 21
and	2n-3 13	Sma	
E	9/9/-2	larg	e n+12 (48)
	n + 2n - 3 = 21		
			n+n+12=84
	3n-3=21		20+12=84
	25-31 N=8		-12 -12 N=00
(0)	STI-ZT	(10)	Divide \$90 emans three monte so that
(9)	One number is 10 more than another. The	(10)	Divide \$80 among three people so that
	sum of twice the smaller number, plus		the second person will have twice as
	three times the larger number is 55.		much as the first, and the third will have
	What are the two numbers?	ach.	\$5 less than the second. \$17,\$34
sma	1 n 5	13r	and \$29
Igra	e n+ 10 15	2nd	2n 34
- Andrews		3rd	2n-5 29
2	n + 3(n+10) = 55	510	2n-5+2n+n=80
2	2n+3n+30=55/		2n-5+2n+11
	5n+30=55 n=5		5n-5=80 n=17
(64)		(12)	Two numbers combined is 72. One of
(11)	A class of 50 students is divided into two	(12)	them is five times the other. What are
	groups; one group has eight less than the		the two numbers?
	other. How many students are in each	1	
101	group?	15+) n 12
15t	n 24	2nd	50 60
2nd	1 1 1 - 8 21	2710	3.7
2110			5n+n=72
	n + n - 8 = 50		6n = 72
	2n-8-50		911-12
	+8 +8 /	1	9
	2n = 58		n=12
	2 2		
	n = 29		