Double Digit Addition With Regrouping

Non-Standard Strategies

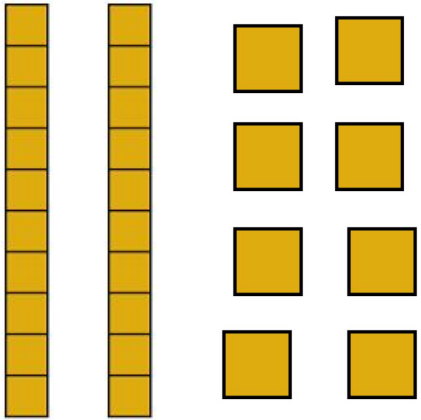
Regrouping...what does that mean?

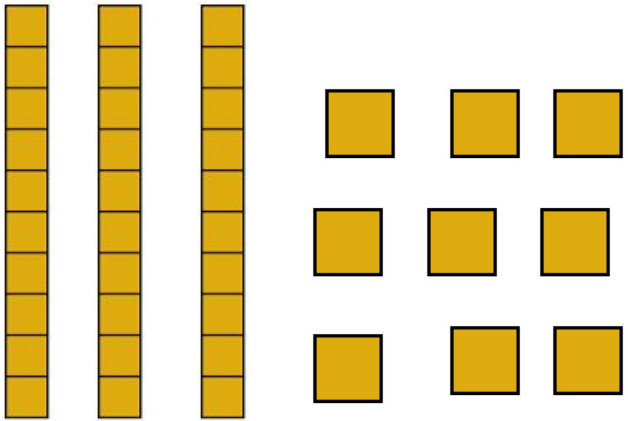
A double digit numbers has digits in both the ones place and the tens place. When we add double digit numbers, we add the numbers from each place together. Sometimes, the sum will be a double digit number, but there is only space for one digit. What will we do then? Watch the strategies in the next slides to learn different ways you can add bigger numbers.

I like to think of it as different villages...there is "Onesville" and "Tens Town". Onesville is only allowed to have 9 or less people living there. If there is more than 9, they have to move to Tens Town.

Using Base Ten Blocks To Add

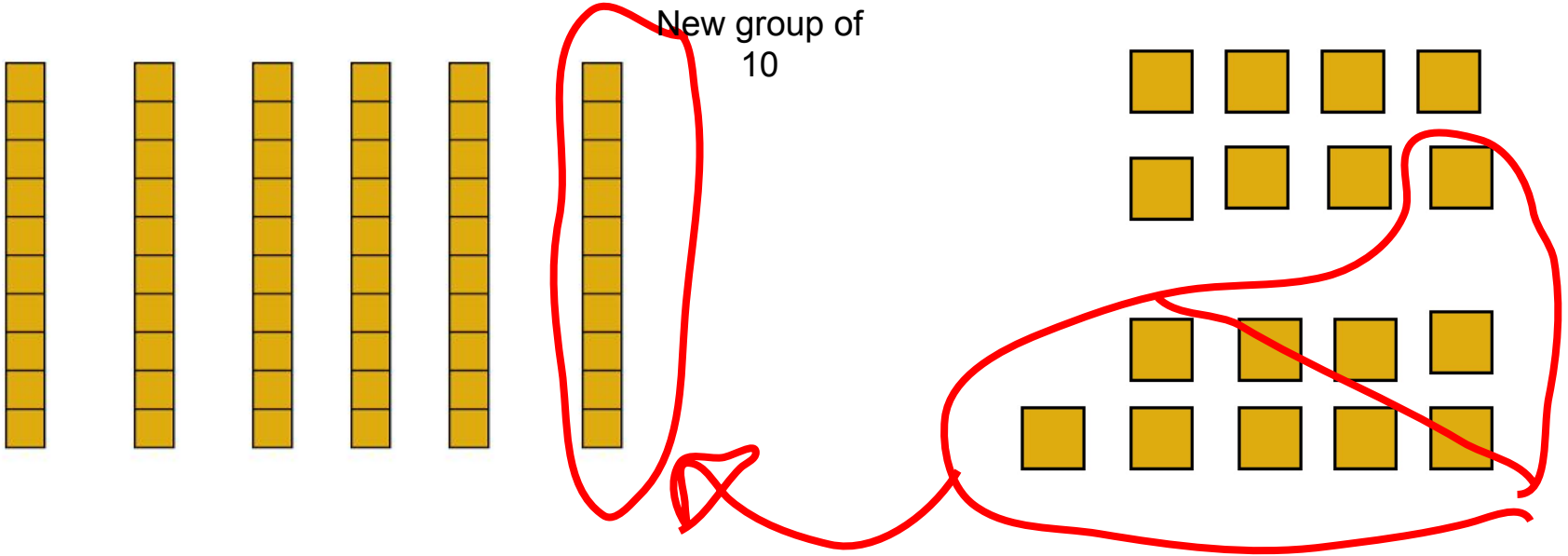
28 + 39 =





I have 5 groups of 10 and 17 ones. That is too many in onesville. I need to regroup and then add. See the next slide to see how I do that...

Using Base Ten Blocks To Add 28 + 39 (5 tens and 17 ones)



I traded 10 ones for 1 ten.

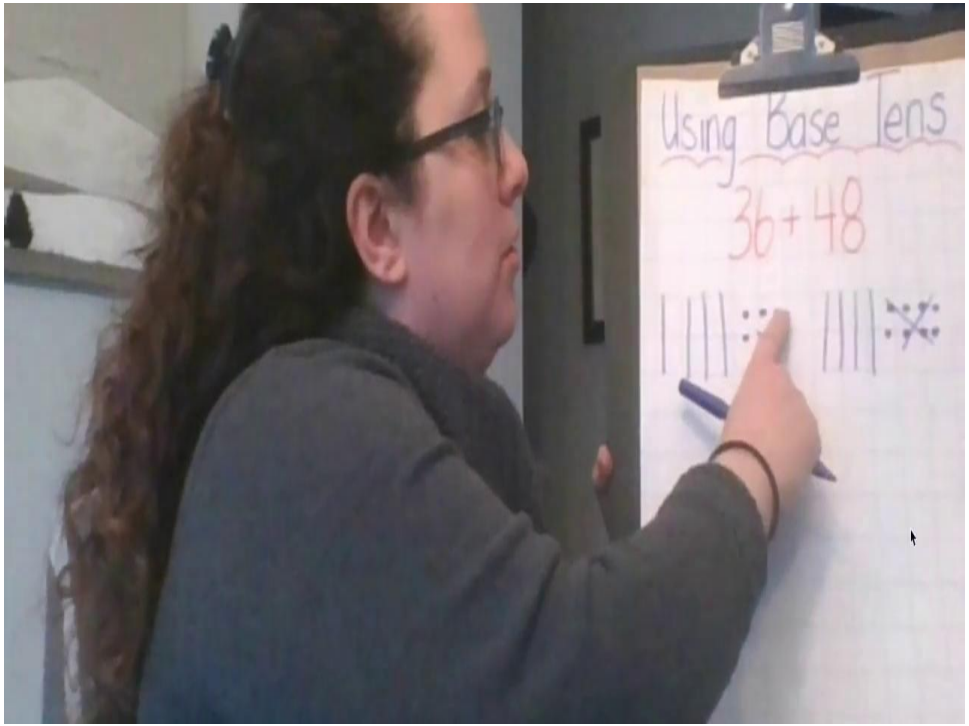
Now I count up what I have. (5 tens and 17 ones turned into 6 tens and 7 ones)

10, 20, 30, 40, 50, 60, 61, 62, 63, 64, 65, 66, 67

28 + 39 = 67

Base Ten Tutorial

Remember to press the back button when you are done, otherwise you will close out the whole slidedeck.



Part Part Whole

You are breaking the numbers into their parts to end up with a whole.

You add the tens together, then the ones. Next step is to add those two answers together.

When you have an answer that has double digits on the ones side, you need to repeat the process.

Step 1

37 + 56

30 + 50 = **80**

7 + 6 = **13**

Step 2

80 + 13

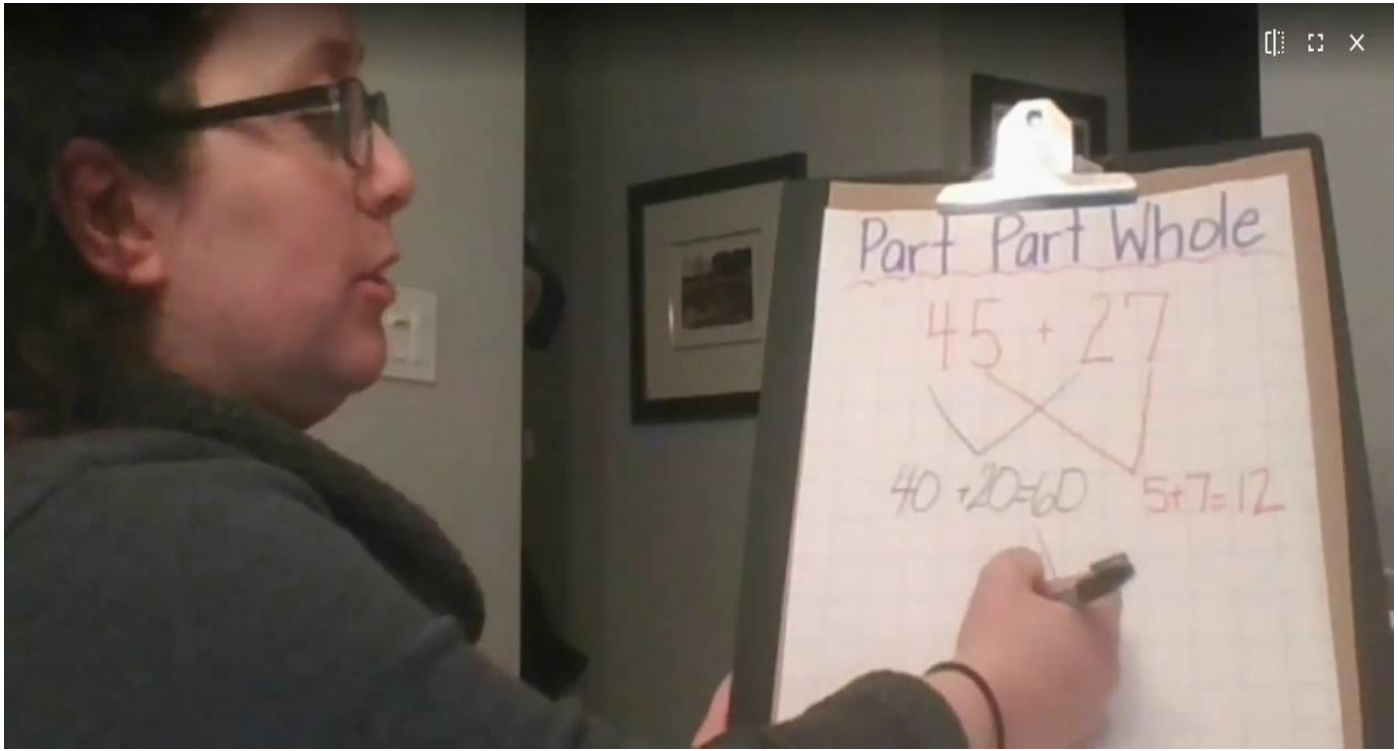
80 + 10 = **90**

0 + 3 = **3**

90 + 3 = 93

37 + 56 = 93

Part Part Whole Tutorial



Adding Then Compensating 38 + 26 =

When adding, sometimes it is easier to use a friendlier number.

38 is close to 40 which is easier for me to add. I can add 2 groups of 10 (from the 26) to 40, and 6 ones.

40 + 20 = 60

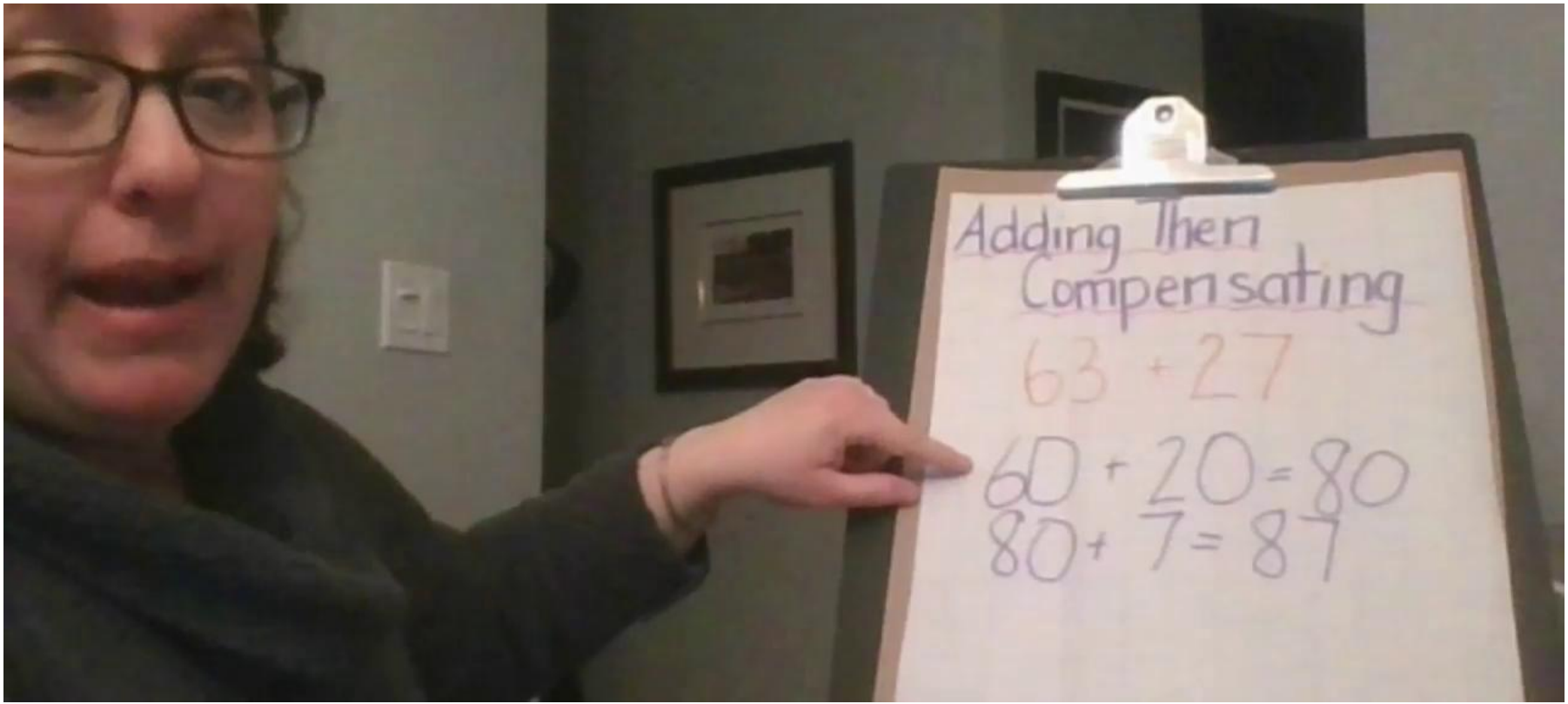
60 + 6 = 66

Now I need to take away the 2 I just added to 38 to make the 40.

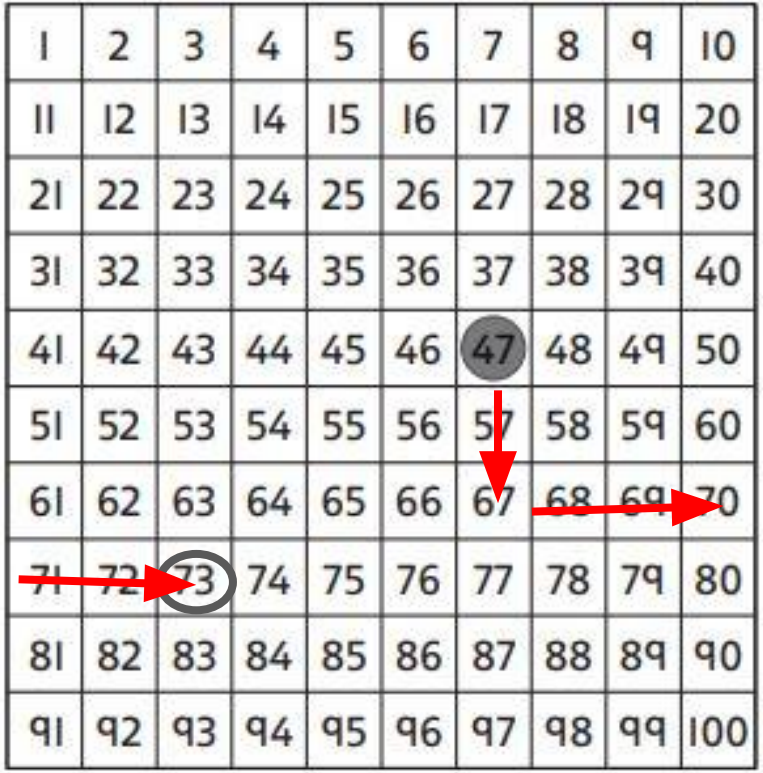
66 - 2 = 64

Which means 38 + 26 = 64.

Adding Then Compensating Tutorial



Using A Hundreds Chart To Add 47 + 26

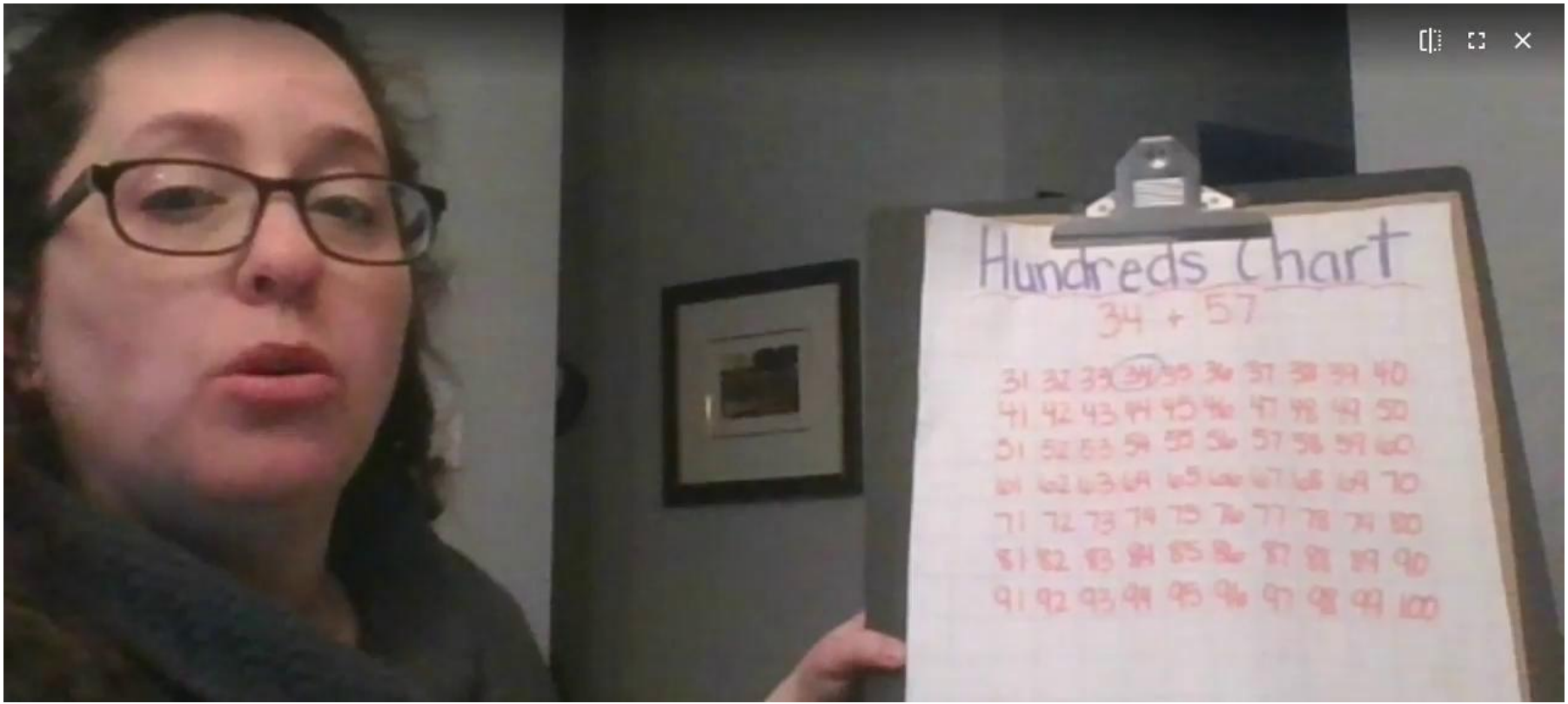


1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

You start at 47. There are 2 groups of ten in 26, so I will go down 2 as each jump is a jump of 10. There are 6 ones in 26, so I will move to the right 6. I need to sweep down a row and continue counting. I land on 73, so

47 + 26 = 73.

Using A Hundreds Chart To Add Tutorial

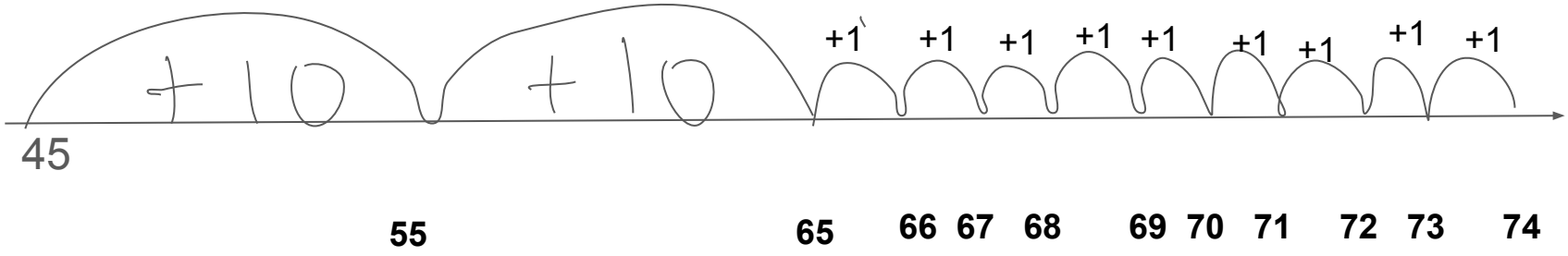


Using An Open Number Line To Add 45 + 29

Start with a line and put the larger number on the left side of the line.

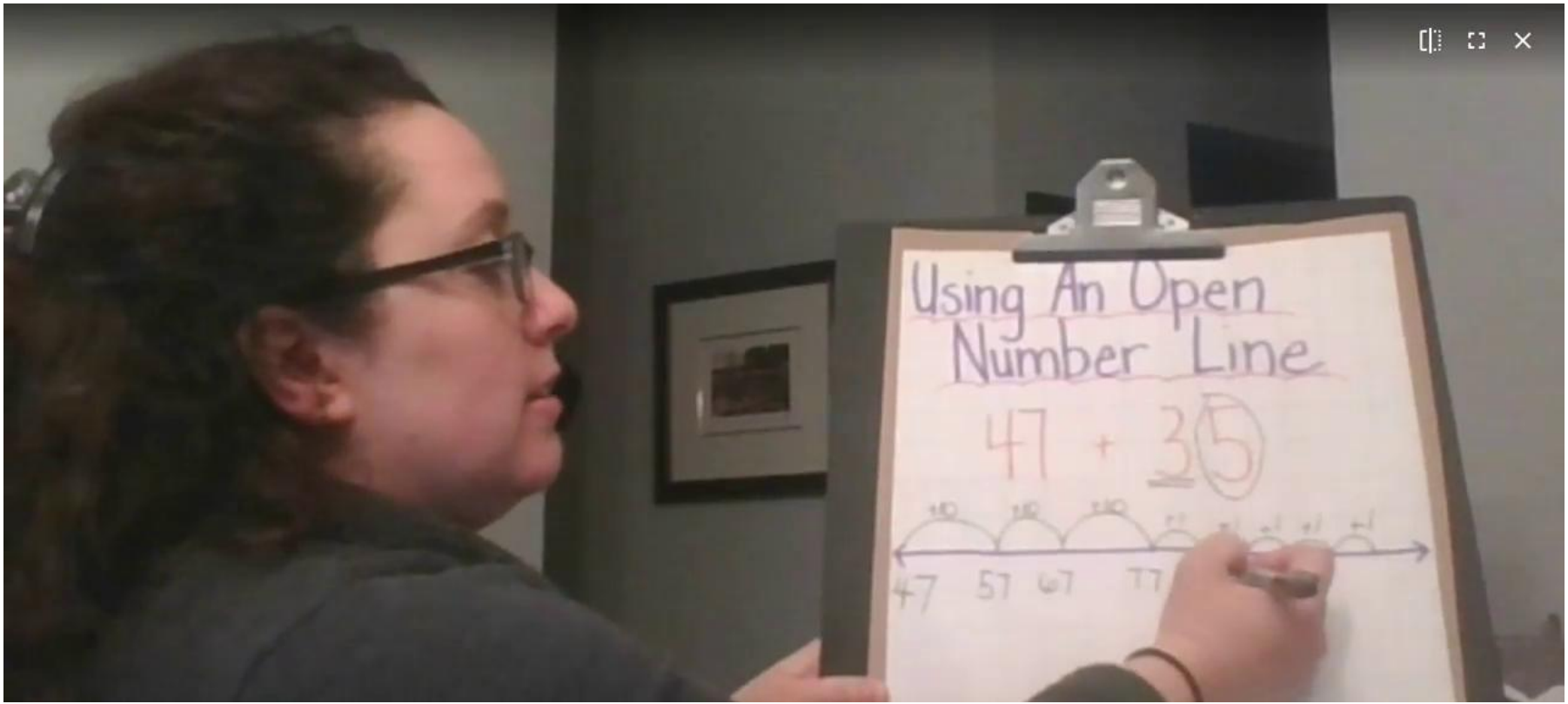
45

Look at the second number, since there are 2 tens in the number 29, draw two large hops of 10. Label the hops. There are 9 ones, so make 9 small hops and label.



Skip count by 10's and then by ones to find the answer. 45 + 29 = 74

Using An Open Number Line To Add Tutorial



Using the strategies just shown, try some on your own.

35 + 48 =	27 + 19 =	64 + 36 =	81 + 39 =
17 + 47 =	67 + 28 =	26 + 26 =	74 + 27 =

Double Digit Addition With Regrouping

Standard Algorithm

Standard Algorithm 48 + 24

When you use the standard algorithm, you line up your numbers horizontally using place value as a guide.

	tens	ones
	1	
	4	8
+	2	4
	7	**2**

Once you have lined up your numbers, start by **adding the digits in the ones column first**. This is really important to remember, otherwise you will not arrive at the correct answer.

Add those digits up, so 8 + 4 = 12. This is where we need to remember that “Onesville” can only hold up to 9. You must have a single digit number in the ones column.

Since the number 12 has 2 digits, you must **regroup**. It has 1 group of ten and 2 ones so I place the 2 in the ones answer space and “kick up” the number in the tens up to “TensTown”.

I then move over to the tens and now add the 3 digits…

1 + 4 + 2 = 7.

48 + 24 = 72

What does it really mean?

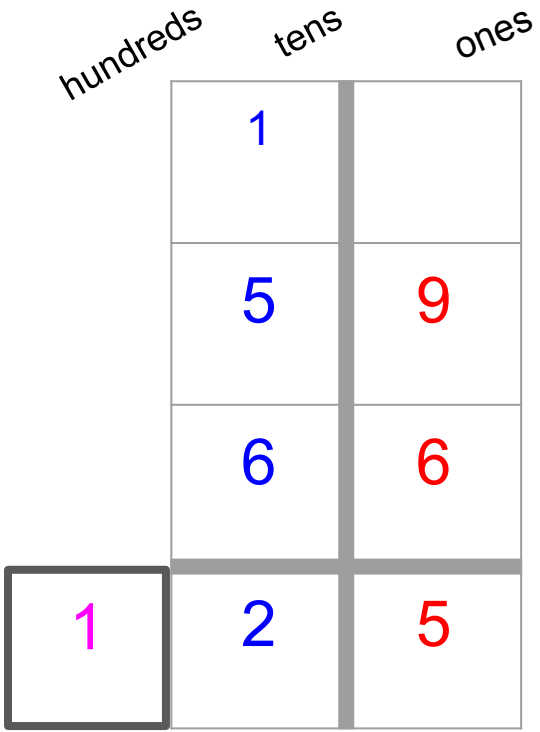
tens	ones
2	8
+1	5
3	13

= 4 tens and 3 ones, or 43

$$\begin{array}{r} 47 \\ +\ 38 \\ \hline 715 \end{array}$$

I. What is wrong with this work?

What do I do if the number in the tens column adds to over 9?

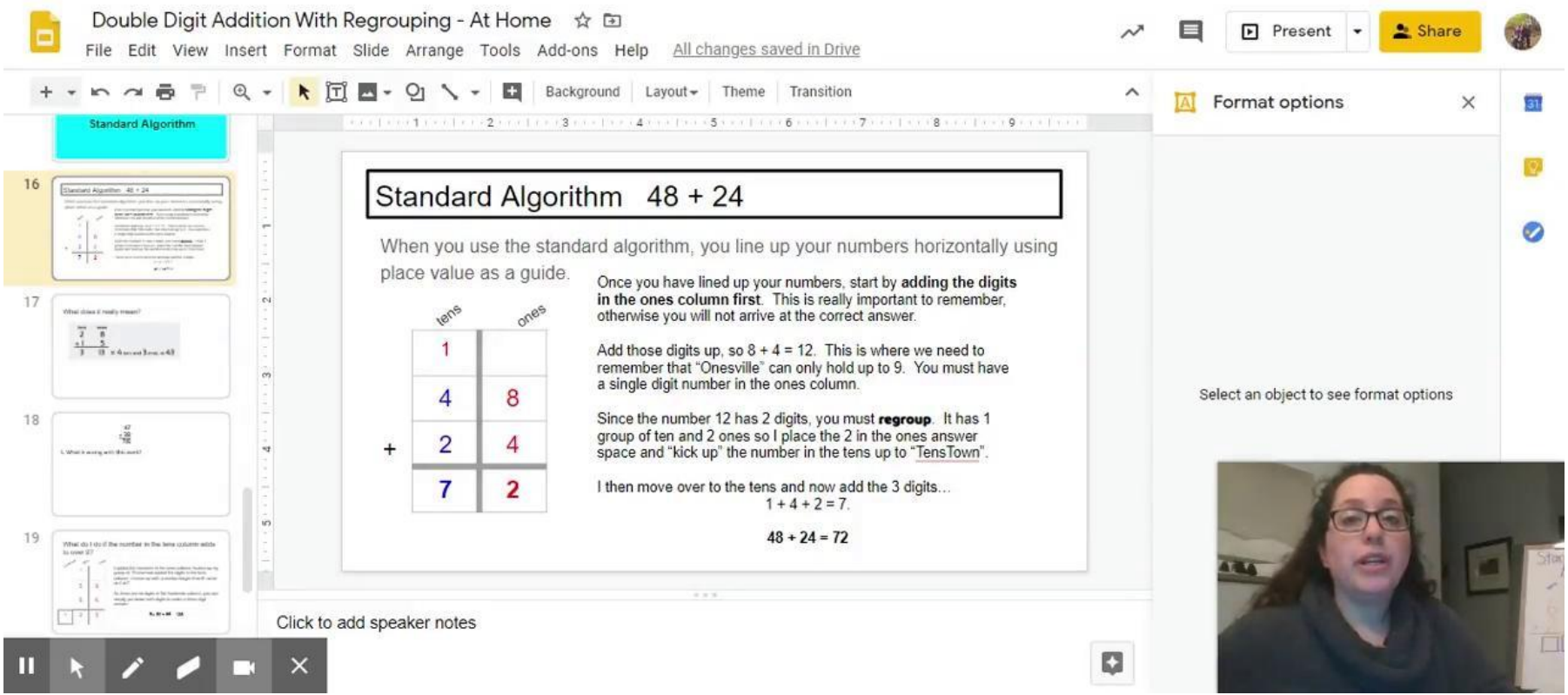


I added the numbers in the ones column, kicked up my group of 10 and now added the digits in the tens column. I come up with a number larger than 9...what do I do?

As there are no digits in the hundreds column, you can simply put down both digits to make a three digit answer.

So 59 + 66 = 125.

Standard Algorithm Tutorial



Using the standard algorithm, try some on your own.

25 + 47	57 + 79	54 + 39	81 + 39
37 + 49	47 + 38	46 + 26	73 + 27