Double Digit Addition Strategies With Regrouping!

Addition Poem

Adds up to 9,
everything is
fine!

$$\begin{array}{r} 631 \\ +\,236 \\ \hline 867 \end{array}$$

Regrouping

10 or more,
take the extra
next door!

$$\begin{array}{r} {\scriptstyle 1} \\ 309 \\ +\,124 \\ \hline 433 \end{array}$$

Addition using the Traditional Algorithm

Addition using the Traditional Algorithm

Step 1

48 + 36 =

Take your number sentence that is horizontally written and write it vertically like seen on this slide.

$$\begin{array}{r} 48 \\ +\ 36 \\ \hline \end{array}$$

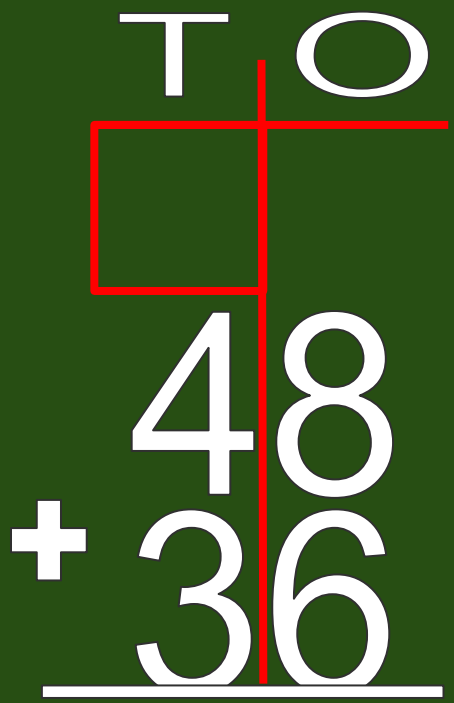
Addition using the Traditional Algorithm

Step 2

48 + 36 =

Now, if it helps you, draw your place value chart over your algorithm.

Draw a box in the tens place in case you have to regroup.



Addition using the Traditional Algorithm

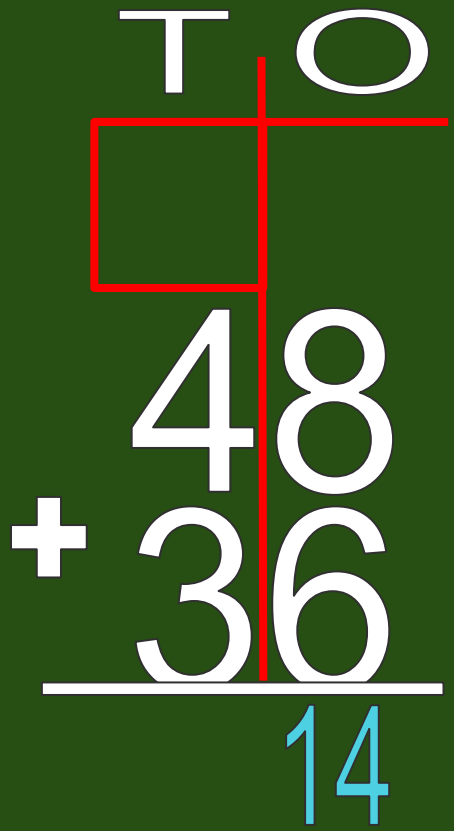
Step 3

48 + 36 =

START IN THE ONES PLACE

Add 8 + 6, you should get 14.

A “siren” should go off because we have “10 or more” so we need to take the ten next door!



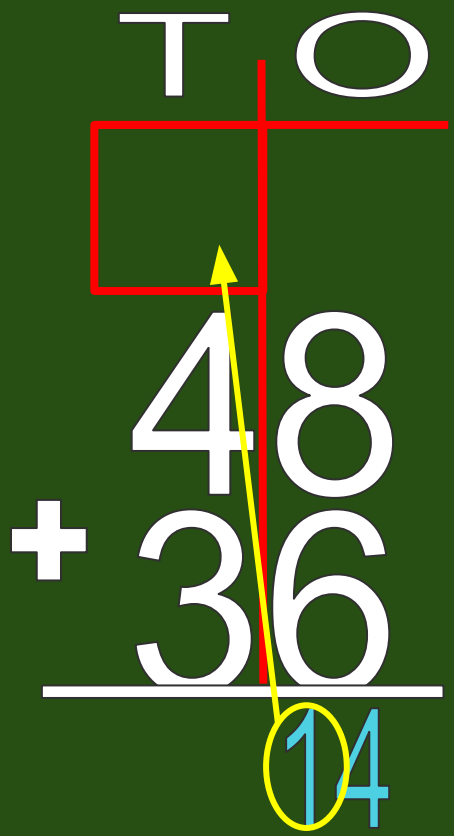
Addition using the Traditional Algorithm

Step 4

48 + 36 =

<u>The 1 in 14 is in the Tens place!</u>

Move the one into the tens place (in that box you created).

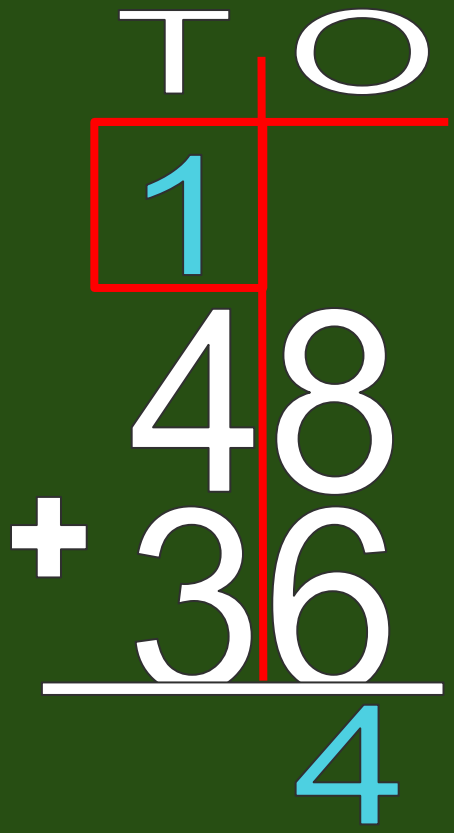


Addition using the Traditional Algorithm

Step 5

48 + 36 =

Now your problem should look similar to this!



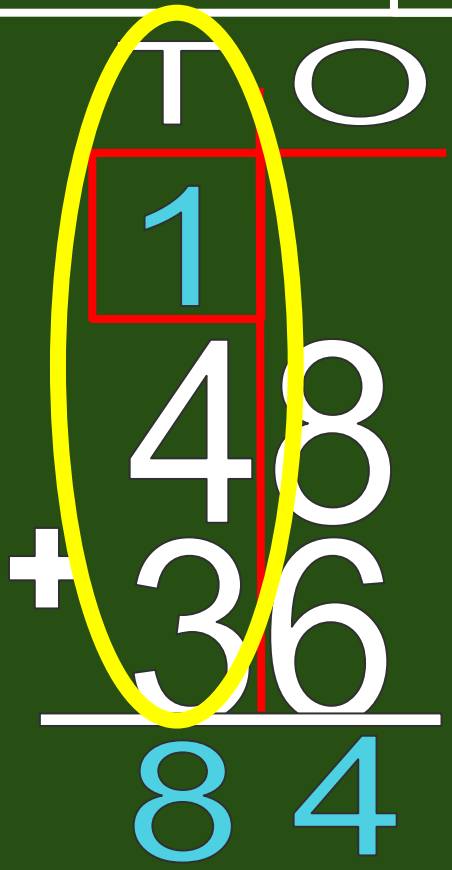
Addition using the Traditional Algorithm

Step 6

48 + 36 =

Now you are going to add up ALL OF THE TENS! (DO NOT FORGET THE 1 THAT YOU CARRIED OVER!)

You should get 8!



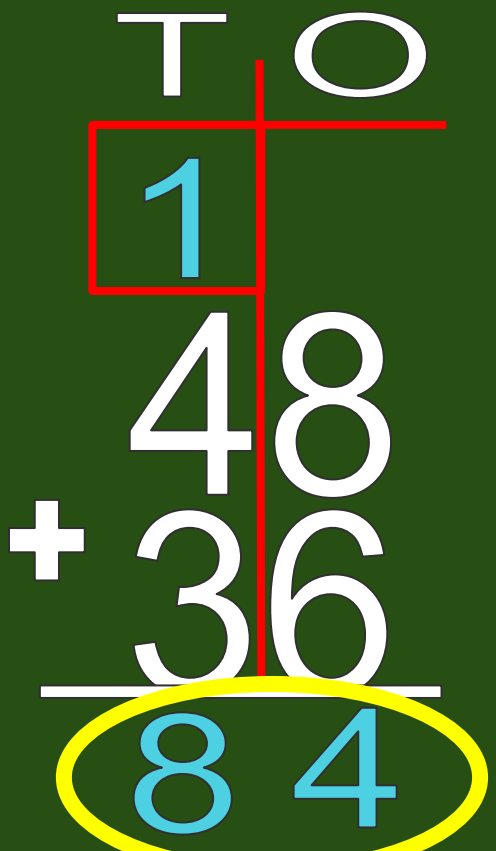
Addition using the Traditional Algorithm

Step 6

48 + 36 =

Now combine your tens and ones!

The solution to your problem should be 84!



Addition using Base 10 Blocks

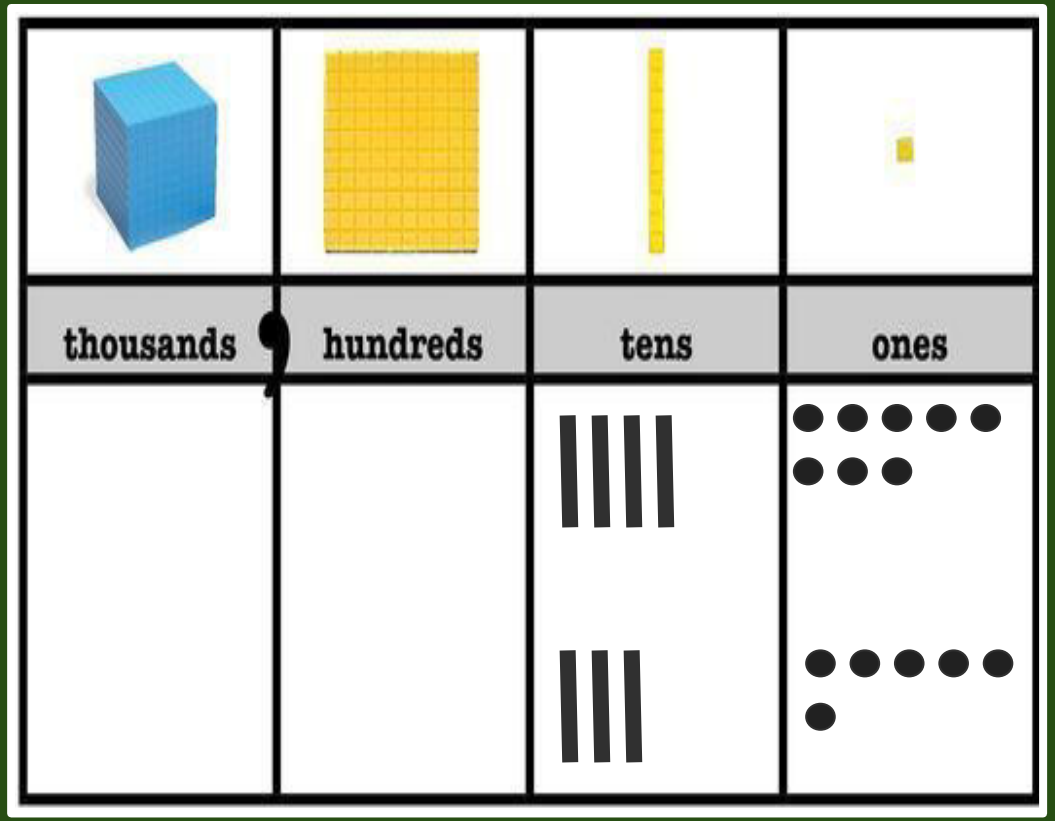
Addition using Base 10 Blocks

Step 1

48 + 36 =

Draw base 10 blocks of **both** numbers. It works well when you use a **place value chart** to help you organize the numbers.

+



Addition using Base 10 Blocks

Step 2

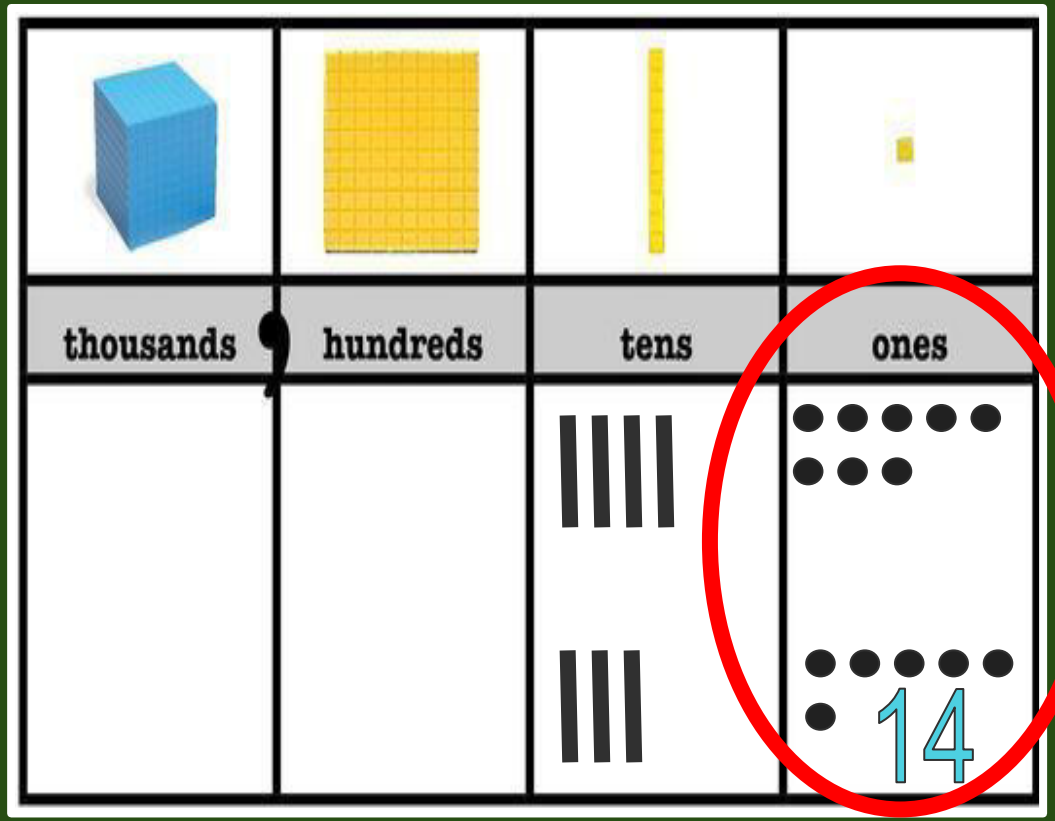
48 + 36 =

START IN THE **ONES** PLACE!

Add up all of the ones.

A “siren” should go off because we have “10 or more” so we need to take the ten next door!

+



Addition using Base 10 Blocks

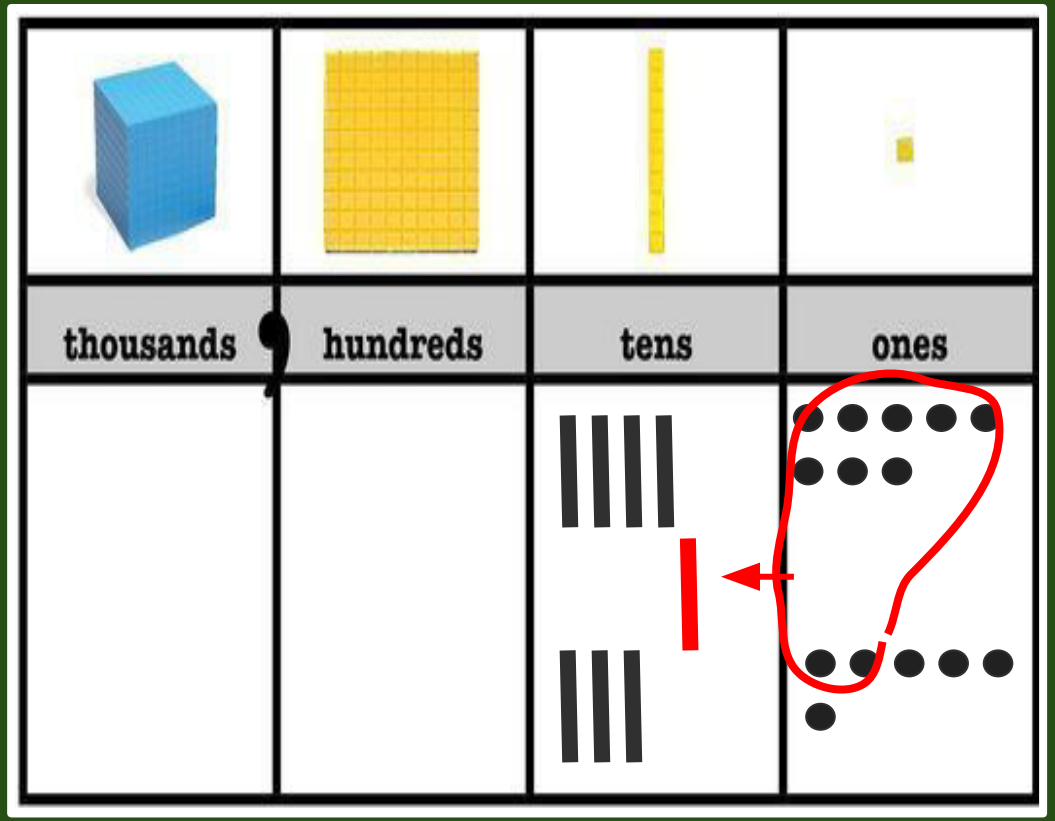
Step 3

48 + 36 =

Put together 10 ones

Form them into a ten stick

Move them on “next door” to the tens place.



Addition using Base 10 Blocks

Step 4

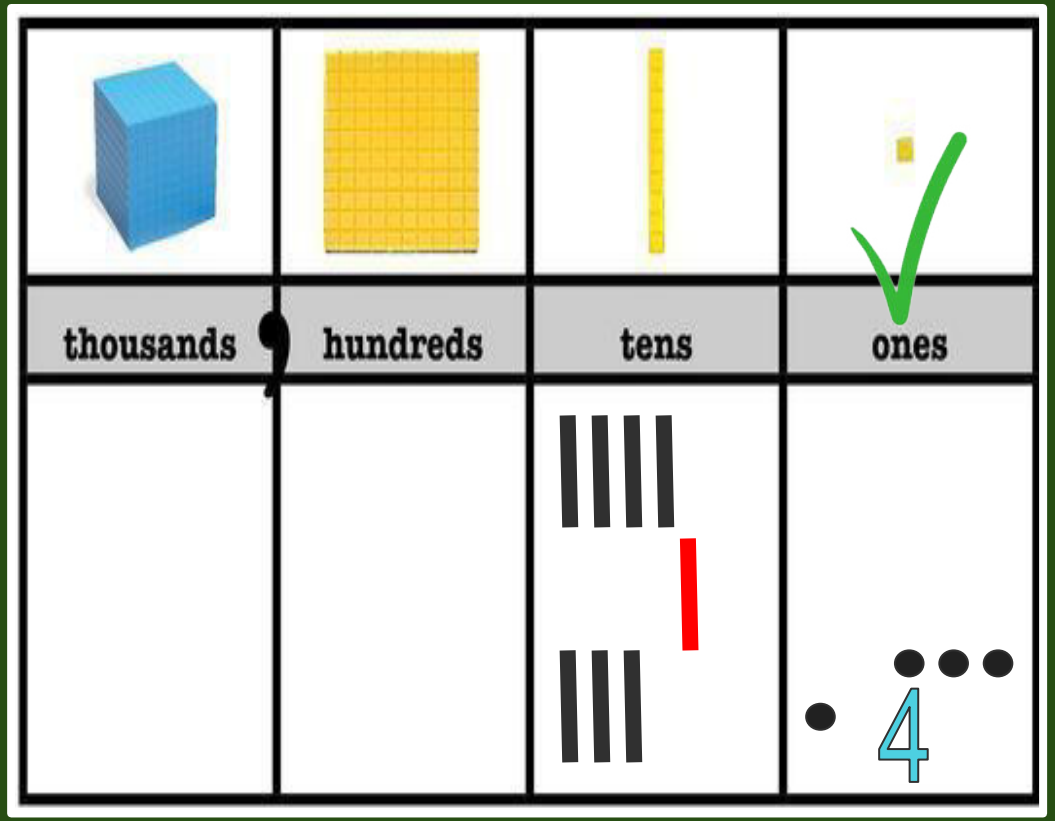
48 + 36 =

Now count how many ones you have left over.

You should have 4!

Now you are done working in the ones place, you can check it off and move onto the tens.

+



Addition using Base 10 Blocks

Step 4

48 + 36 =

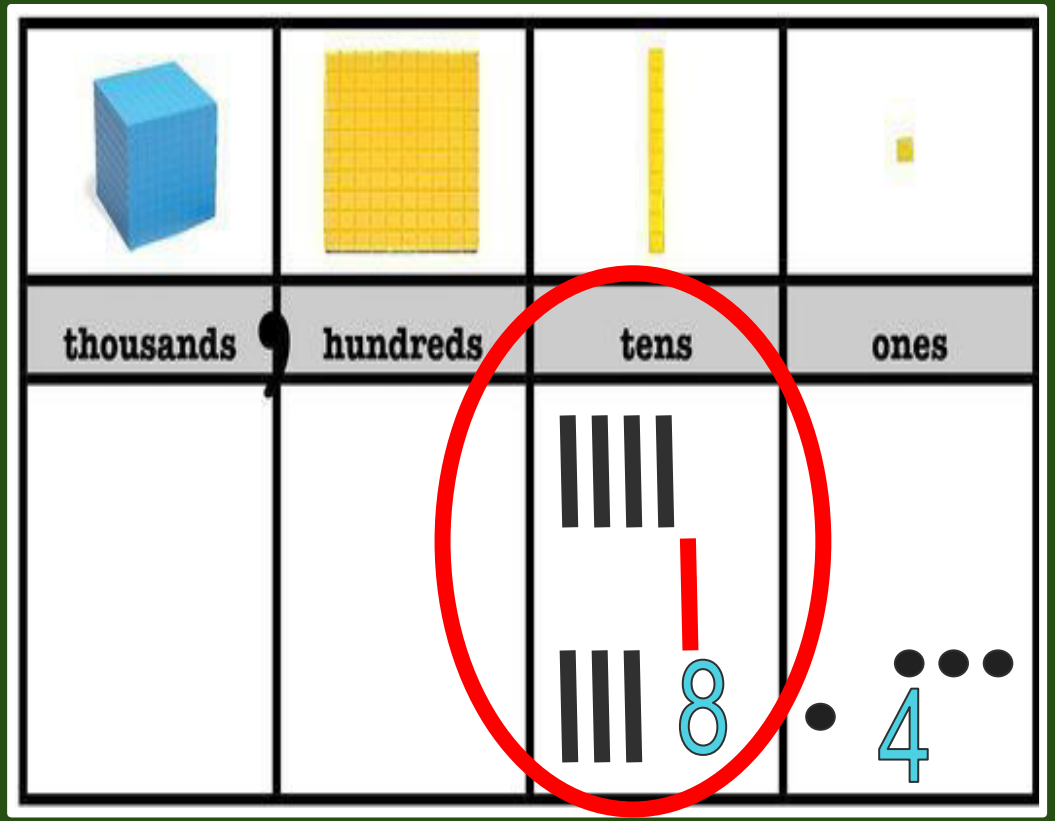
Next, add up ALL of the TENS.

Do not forget to add the one that you regrouped from the ones place!

You should of got 8 tens!

Since the answer is below nine, everything is fine!

+



Addition using Base 10 Blocks

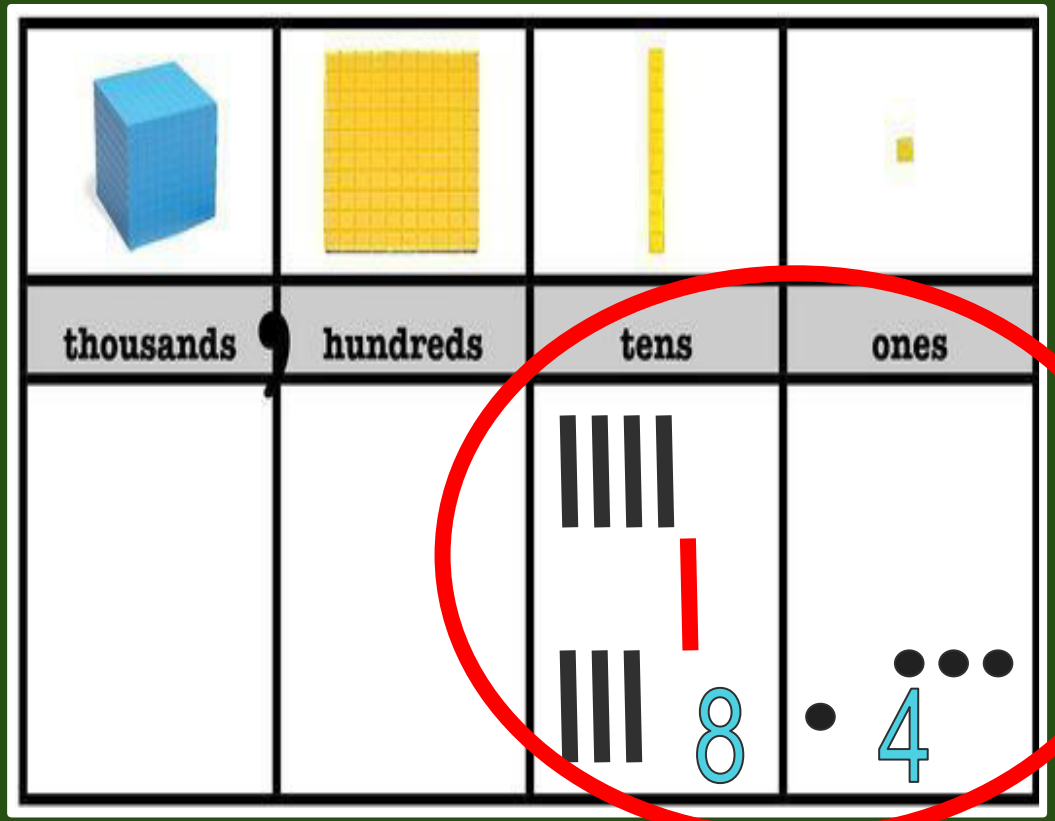
Step 4

48 + 36 =

Now put the tens and ones together!

You should get 84!

+



Addition using Expanded Form

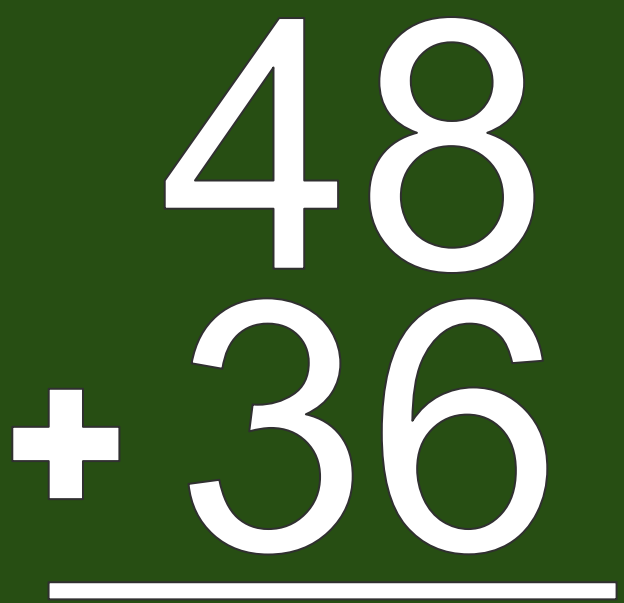
Option 1

Addition using Expanded Form (Option 1)

Step 1

48 + 36 =

Take your number sentence that is horizontally written and write it vertically like seen on this slide.



Addition using Expanded Form (Option 1)

Step 2

48 + 36 =

Next you are going to take your numbers and EXPAND THEM OUT into **tens** and ones!

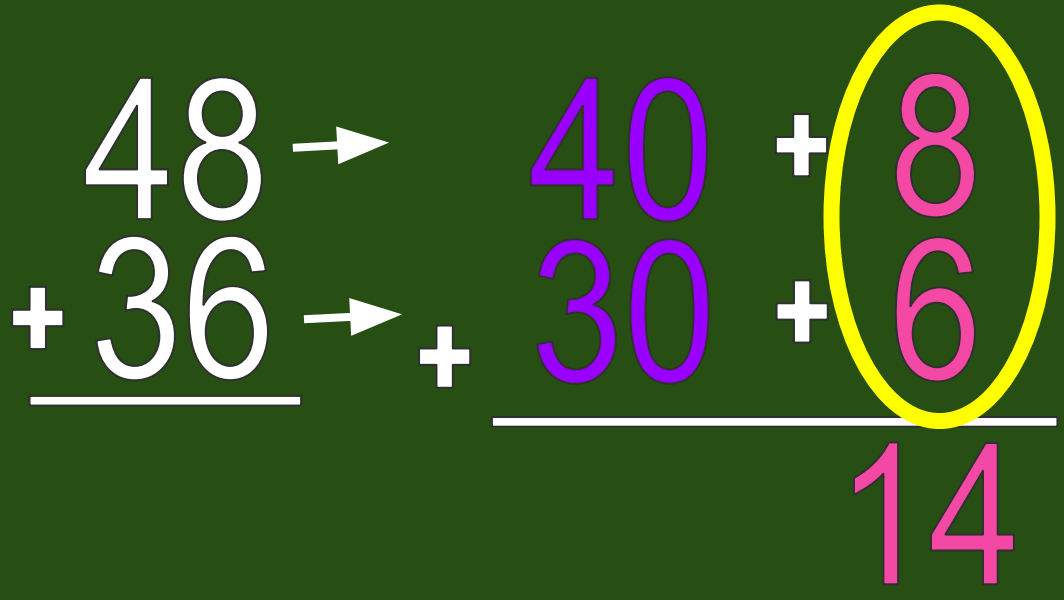
$$\begin{array}{rcl} 48 & \rightarrow & 40 + 8 \\ +\,36 & \rightarrow & +\ 30 + 6 \\ \hline & & \end{array}$$

Addition using Expanded Form (Option 1)

Step 3

48 + 36 =

Combine your ones together!

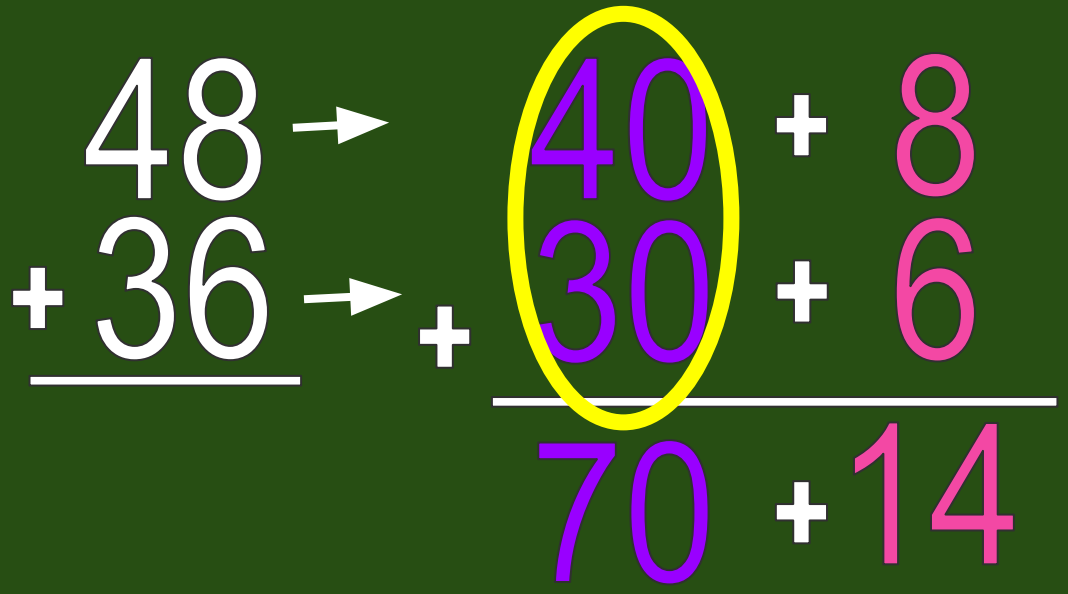


Addition using Expanded Form (Option 1)

Step 4

48 + 36 =

Next, combine your tens together!



Addition using Expanded Form (Option 1)

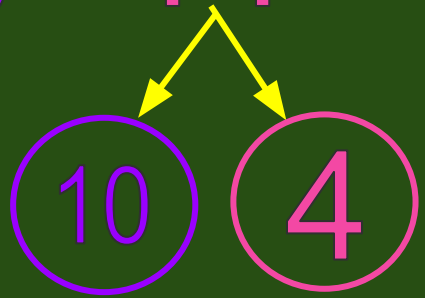
Step 5

48 + 36 =

You should notice that your ones now are more than "9."

So you are going to expand 14 out to tens and ones.

$$\begin{array}{rcl} 48 & \rightarrow & 40 + 8 \\ +\,36 & \rightarrow & +\ 30 + 6 \\ \hline & & 70 + 14 \end{array}$$



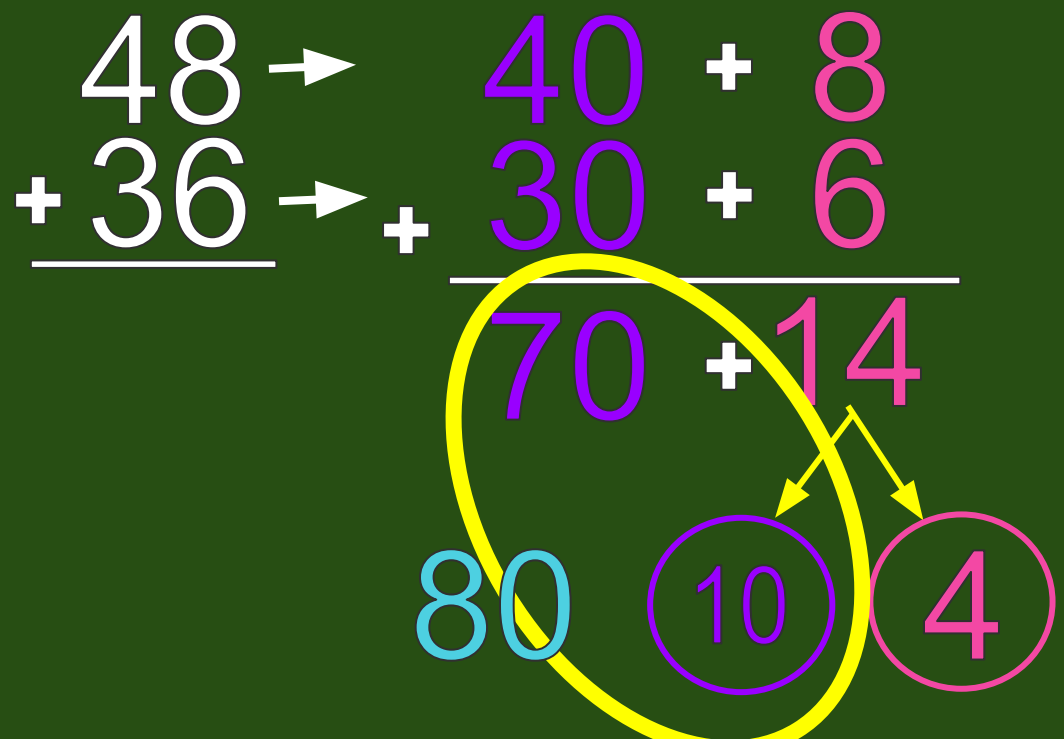
Addition using Expanded Form (Option 1)

Step 6

48 + 36 =

Now combine the 10 from the 14 with the 70.

You should get 80.



Addition using Expanded Form (Option 1)

Step 7

48 + 36 =

Now you have 80 + 4.

Combine the tens and the ones to get 84!

$$\begin{array}{r} 48 \rightarrow \\ +\ 36 \rightarrow \\ \hline \end{array} \quad \begin{array}{l} 40 + 8 \\ +\ 30 + 6 \\ \hline 70 + 14 \end{array}$$

84

80 + 4

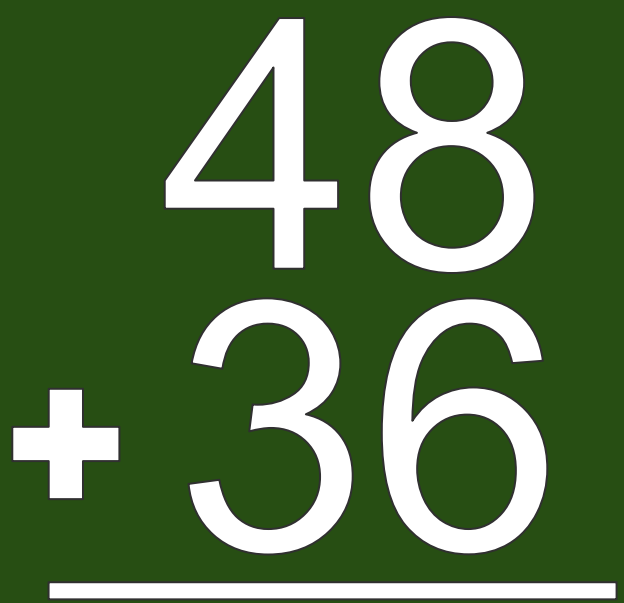
Addition using Expanded Form
Option 2

Addition using Expanded Form (Option 2)

Step 1

48 + 36 =

Take your number sentence that is horizontally written and write it vertically like seen on this slide.



Addition using Expanded Form (Option 2)

Step 2

48 + 36 =

Next you are going to take your numbers and EXPAND THEM OUT into **tens** and ones!

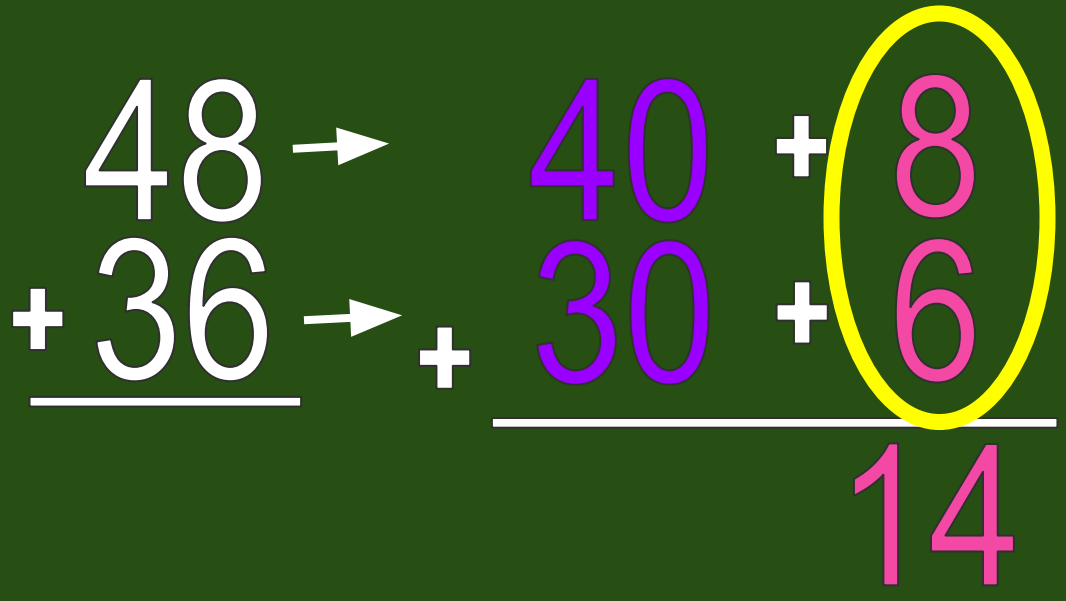
$$\begin{array}{rcl} 48 & \rightarrow & 40 + 8 \\ +\,36 & \rightarrow & +\ 30 + 6 \\ \hline & & \end{array}$$

Addition using Expanded Form (Option 2)

Step 3

48 + 36 =

Combine your ones together!



Addition using Expanded Form (Option 2)

Step 4

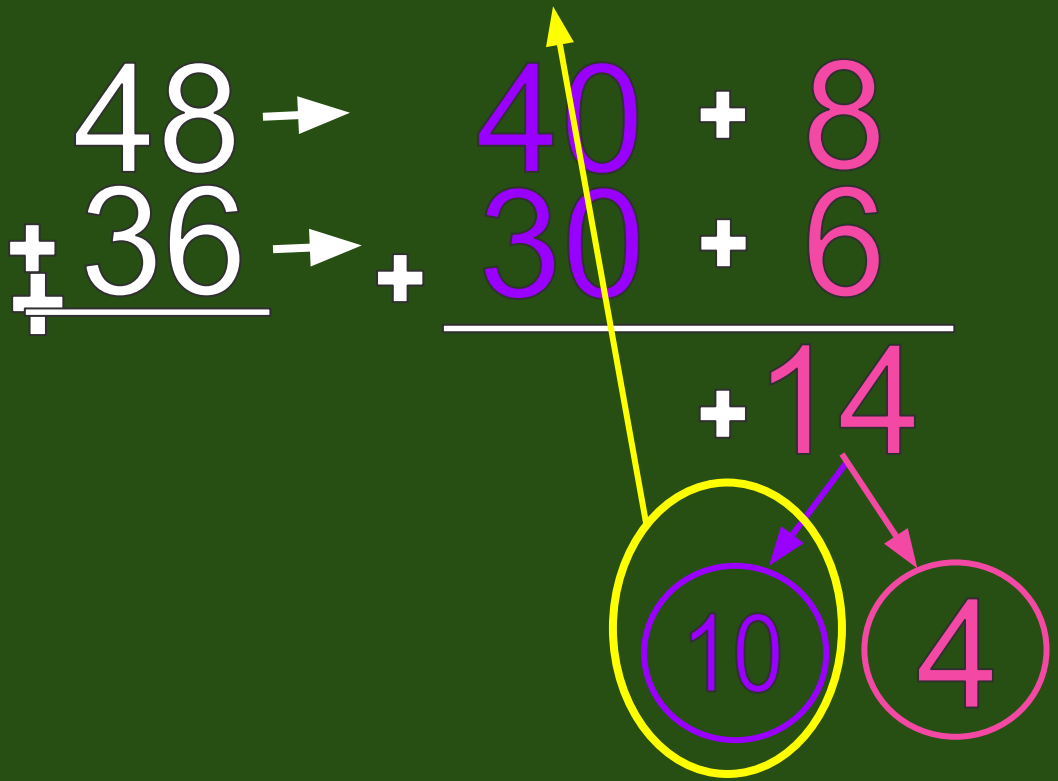
48 + 36 =

You should see that you have more than 9 in your tens!

Expand 14

Take the tens place of 14 and move that ten to be with the other tens!

You should have 4 left over.

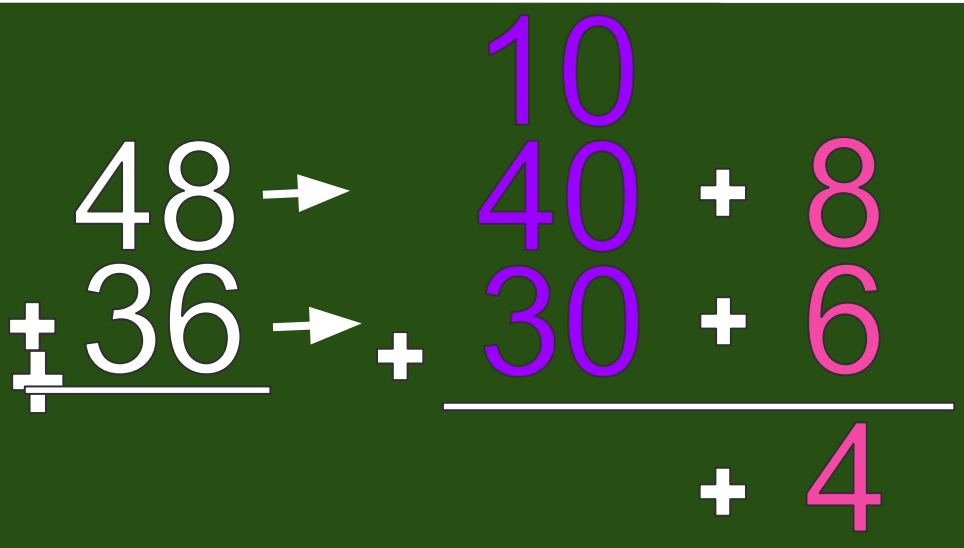


Addition using Expanded Form (Option 2)

Step 5

48 + 36 =

Now your problem should look like this.



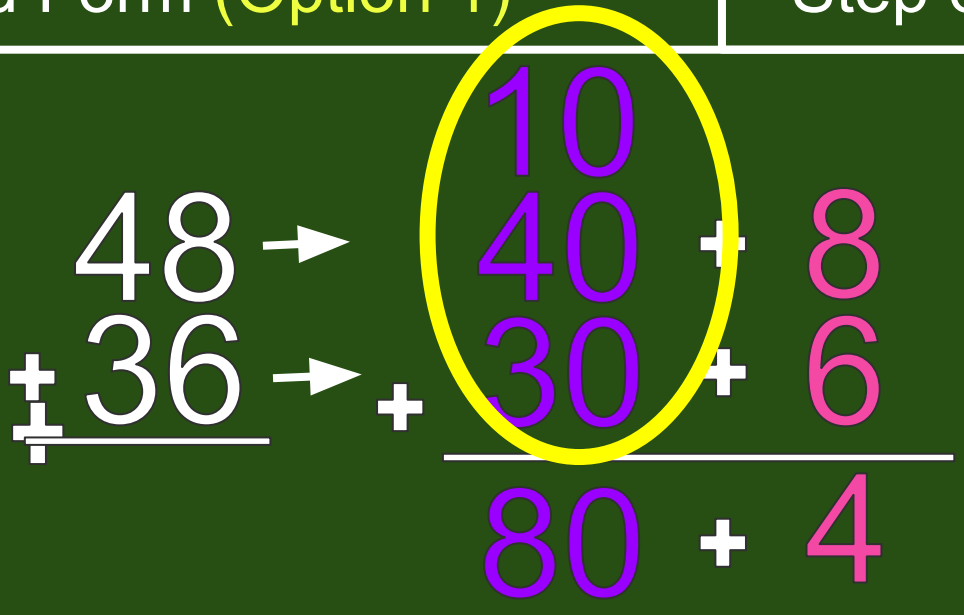
Addition using Expanded Form (Option 1)

Step 6

48 + 36 =

Now combine the tens.

Be sure not to forget the ten that you added!



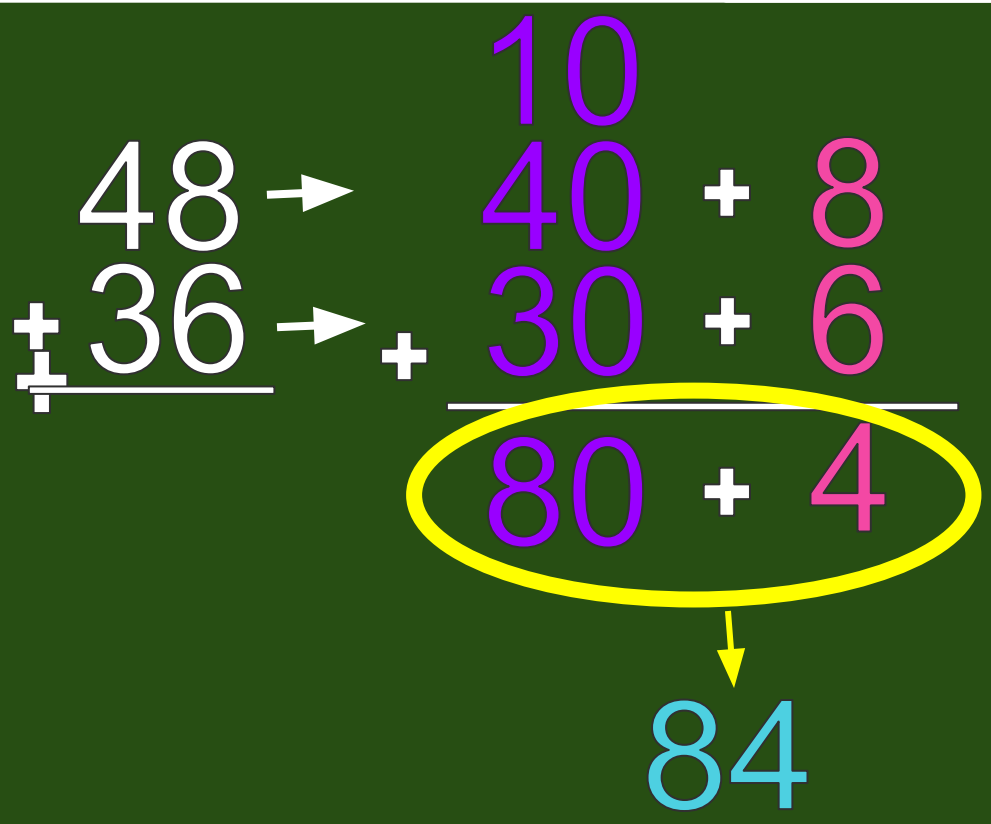
Addition using Expanded Form (Option 1)

Step 7

48 + 36 =

Now combine the final tens with the final ones.

You should get 84!



Addition using an Open Number Line

Addition using an Open Number Line	Step 1

48 + 36 =
Draw an Open Number Line

Addition using an Open Number Line	Step 2

48 + 36 =
Put the first number at the beginning of line.

Addition using an Open Number Line	Step 3

48 + 36 =
Expand 36 into 30 + 6

$$36 = 30 + 6$$

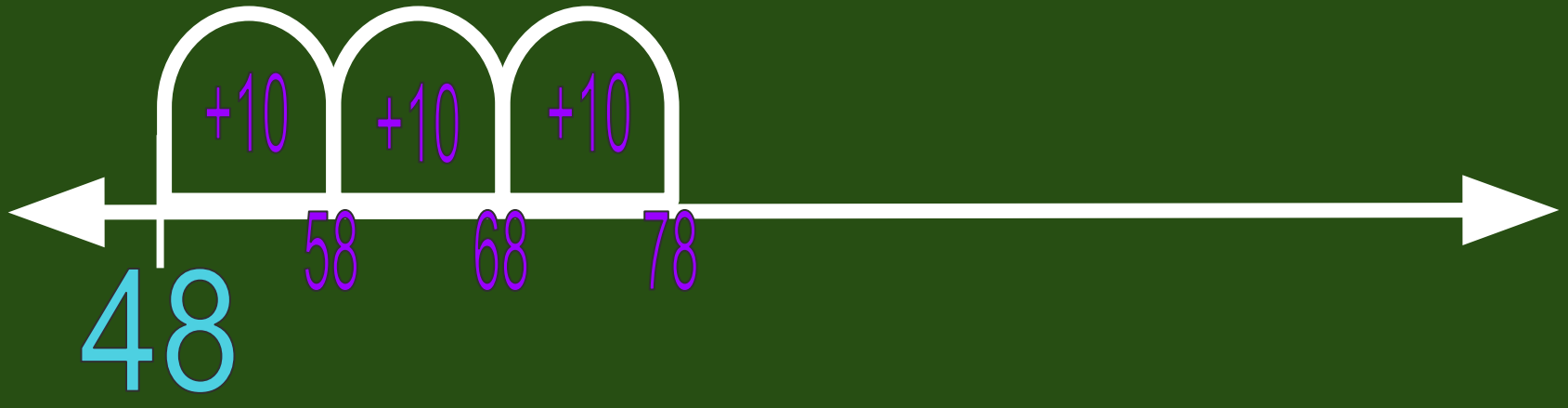
Addition using an Open Number Line

Step 4

48 + 36 =

Add 30 by each 10 as seen below

36 = 30 + 6



Addition using an Open Number Line

Step 5

48 + 36 =

Now add the 6 by 1's as seen below.

You should get a solution of 84!

$36 = 30 + 6$