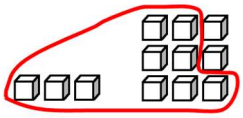
Regrouping in Addition

This is a complete lesson with instruction and exercises about regrouping in addition with 2-digit numbers (aka carrying). It is meant for initial instruction on the topic in 2nd grade. First, students use visual models (base ten blocks) to group ten units together and to record the addition with numbers written under each other (in columns). Then they practice the procedure without the visuals.

When adding 3 + 9, we can circle ten little ones to form a ten. We write "1" in the tens column.

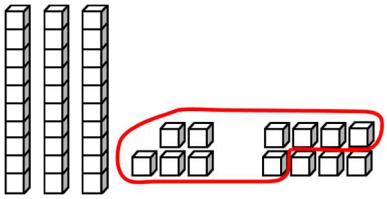
There are two little ones left over, so we write "2" in the ones column.



	tens	ones
		3
+		9
	1	2

With 35 + 8, we circle ten little ones to make a ten. There already are three tens, so in total we now have <u>four</u> tens. So, we write "4" in the tens column.

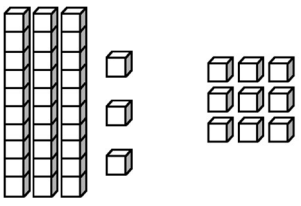
There are three little cubes left over, so we write "3" in the ones column.



	tens	ones
	3	5
+		8
	4	3

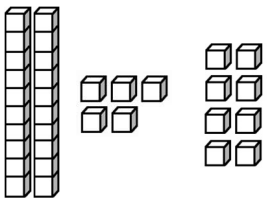
1. **Circle** ten cubes to make **a new ten**. Count the tens, including the new one. Count the ones. Write the tens and ones in their own columns. You can also use manipulatives.

a.



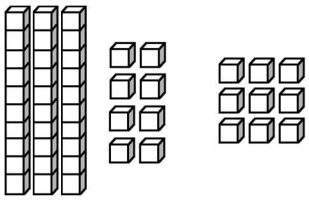
	tens	ones
	3	3
+		9

b.



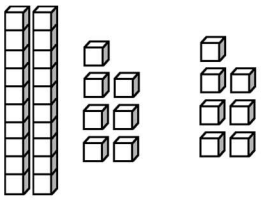
	tens	ones
	2	5
+		8

c.



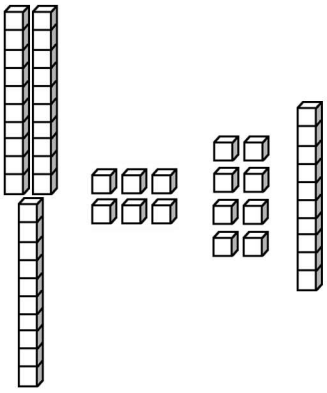
	tens	ones
	3	8
+		9

d.



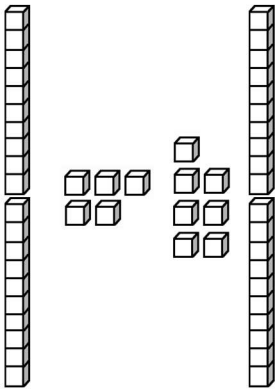
	tens	ones
	2	7
+		7

e.



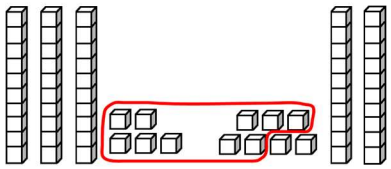
	tens	ones
	3	6
+	1	8

f.



	tens	ones
	2	5
+	2	7

When we make a new ten from the ones, we are **regrouping**. The ten ones get grouped as a ten, and are counted with the other tens.



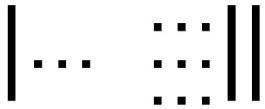
	tens	ones
	1	
	3	5
+	2	7
	6	2

This is also called **carrying to tens**.
Imagine someone "gathering" ten little cubes in his lap and "carrying" them over into the tens column as 1 ten.

To show this new ten, write a little "1" in the tens column above the other numbers.
Then add in the tens-column as usual, adding the little "1" also.

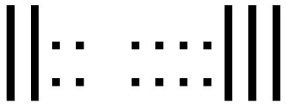
2. Circle ten ones to make a new ten. Add the tens and ones in columns.

a.

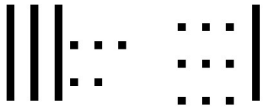
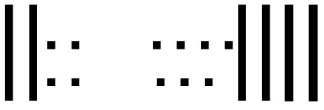
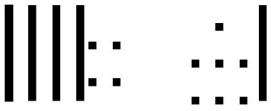
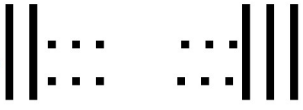
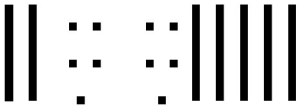
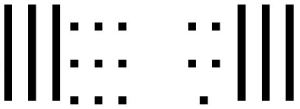


tens	ones
1	
1	3

b.



tens	ones
1	
2	4

+ 2 9 2	+ 3 8
c.  tens ones 1 3 5 + 1 9	d.  tens ones 1 2 4 + 4 7
e. 	f. 
g. 	h. 

3. Add. If you can make a new ten from the ones, regroup.

a. 4 2 + 1 5 = _____

b. 2 7 + 4 5 = _____

c. 6 5 + 2 6 = _____

d. 8 3 + 1 5 = _____

e. 3 4 + 1 9 = _____

f.
$$\begin{array}{r} 52 \\ +\ 41 \\ \hline \end{array}$$

g.
$$\begin{array}{r} 13 \\ +\ 44 \\ \hline \end{array}$$

h.
$$\begin{array}{r} 63 \\ +\ 27 \\ \hline \end{array}$$

i.
$$\begin{array}{r} 36 \\ +\ 51 \\ \hline \end{array}$$

j.
$$\begin{array}{r} 66 \\ +\ 29 \\ \hline \end{array}$$

We can add three numbers by writing them under each other. This is not any more difficult than adding two numbers.

On the right, first add the ones. 2 + 7 + 5 = 14. You get a new ten. So, regroup and write that new ten with the other tens.

In the tens, add 1 + 3 + 2 + 1 = 7.

$$\begin{array}{r} {\scriptstyle 1\ \ \ } \\ 32 \\ 27 \\ +\ 15 \\ \hline 74 \end{array}$$

4. Add. Regroup the ones to make a new ten.

a.
$$\begin{array}{r} 34 \\ 19 \\ +\ 26 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 15 \\ 27 \\ +\ 45 \\ \hline \end{array}$$

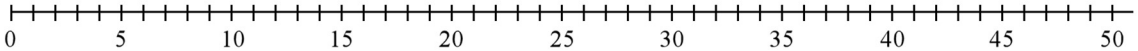
c.
$$\begin{array}{r} 13 \\ 27 \\ +\ 26 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 26 \\ 42 \\ +\ 19 \\ \hline \end{array}$$

e.
$$\begin{array}{r} 34 \\ 21 \\ +\ 19 \\ \hline \end{array}$$

5. Show the additions on the number line by drawing lines that are that long.

a. 13 + 9 + 11 = _____



b. 27 + 16 = _____