Addition using expanded column method—NOT crossing tens

- Focus on understanding the place value of each digit in the number.

56 + 32 =

50 + 6
+ 30 + 2
80 + 8 = 88

1. 1. Partition the first number into tens and ones. Then underneath this partition the second number. Ensure they are placed under the correct tens and ones column correctly.
   2. Put the addition sign in between the two numbers—this is to show they have been partitioned—they still equal the same amount as the initial number sentence.
   3. Draw the two lines and add the addition sign at the side so we know what calculation we are doing.
   4. Then add the tens and ones in their columns. ALWAYS starting with the ones. Write the answer in between the two lines. Then add the tens in the same way.
   5. Once the addition is completed recombine the tens and ones.

Addition using expanded column method—crossing tens

- Focus on understanding the place value of each digit in the number.

56 + 27 =

50 + 6
+ 20 + 7
10
80 + 3 = 83

1. 1. Partition the first number into tens and ones. Then underneath this partition the second number. Ensure they are placed under the correct tens and ones column correctly.
   2. Put the addition sign in between the two numbers—this is to show they have been partitioned—they still equal the same amount as the initial number sentence.
   3. Draw the two lines and add the addition sign at the side so we know what calculation we are doing.
   4. Then add the tens and ones in their columns. ALWAYS starting with the ones.
   5. If the ones column then crosses into the tens we must leave the ones in the ones column and then place the ten in the tens column.
   6. Write the answer in between the two lines. Then add the tens in the same way. Remember to include the additional ten now.
   7. Once the addition is completed recombine the tens and ones.

Subtraction using expanded column method

- Focus on understanding the place value of each digit in the number.
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53—21 =

$$\begin{array}{r} 50 + 3 \\ -\ 20 + 1 \\ \hline 30 + 2 \\ \hline \end{array} = 32$$

1. Partition each of the numbers into their tens and ones.
2. Make sure the tens and ones are positioned in the correct column. Even though we are subtracting we still need to use the addition sign to show we have partitioned the numbers.
3. Draw two lines. Write the subtraction sign at the side.
4. Start with the ones column and subtract the number. Then move to the tens column and subtract.
5. Once the subtraction is completed recombine the tens and ones.

Subtraction using expanded column method—exchanging

53—25 =

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  40
  ~~50~~ + 13
- 20 + 5
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  20 + 8 = 28
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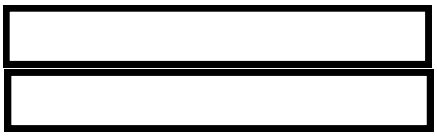
1. Partition each of the numbers into their tens and ones.
2. Make sure the tens and ones are positioned in the correct column. Even though we are subtracting we still need to use the addition sign to show we have partitioned the numbers.
3. Draw two lines. Write the subtraction sign at the side.
4. Start with the ones column and subtract the number. If we aren't able to subtract we need to exchange one ten and move it to the ones column. We can now subtract the ones. Then move to the tens column to subtract — remembering we exchanged one so there will be ten less.
5. Once the subtraction is completed recombine the tens and ones.

Multiplication using bar models

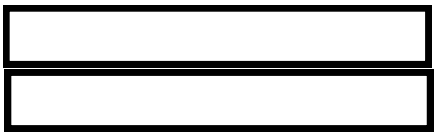
4 X 5 = 20			
5	5	5	5



1. Draw a bar model.
2. Write the multiplication sentence in the top bar.
3. Then look to see how many 'lots of/groups of' the number there are. Draw this amount of boxes in the bar below.
4. Write the multiplication number in each of the boxes. Count up in this number to find the answer.
5. Show that the top bar is equal/the same as the bottom bar. The value is the same as they are the same size.

Division using bar models

12 ÷ 2 = 6
2 2 2 2 2 2



1. Draw a bar model.
2. Write the division sentence in the top bar.
3. Look at the second number to determine what number we count up in.
4. In the box below count up in ___ until you get to the first number.
5. Count how many ____ we have. This is our answer.