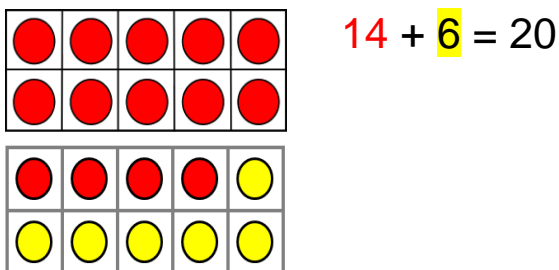
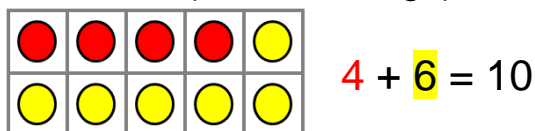


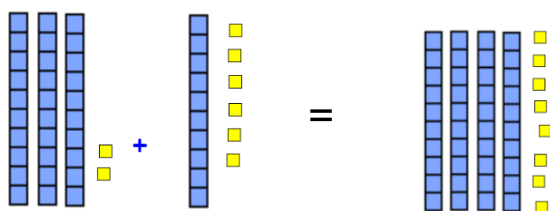
Addition:

First, we teach children to add using ten frames up to 10 and 20 and to use their related facts (concrete stage): $4 + 6 = 10$, so $16 + 6$ must be 20.



Then, we teach children how to add 2-digit numbers over 20 using **tens** and **ones**.

$$32 + 16 = 48$$

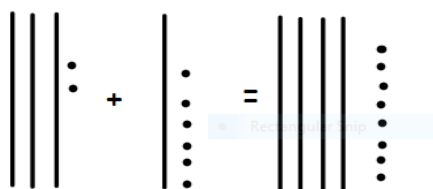


32

16

48

If you don't have tens and ones at home, your child can use straws or matchsticks to represent bundles of tens. Once children are confident solving addition problems with these resources, they can move on to drawing tens and ones (pictorial stage):



$$32 + 16 = 48$$

Once children have understood this, they use their knowledge of related facts: If I know that $3 + 1 = 4$, then I know that $30 + 10 = 40$.

$$2 \text{ ones} + 6 \text{ ones} = 8 \text{ ones}$$

$$\text{so... } 40 + 8 = 48$$

Eventually, when ready, they can move onto crossing the tens boundary using the part whole method, or partitioning (abstract stage). We **don't** use the column method at this point.

$$\begin{array}{r} 26 + 37 \\ \quad \swarrow \searrow \\ \quad 30 \quad 7 \end{array}$$

Subtraction:

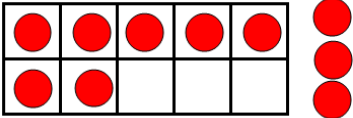
As with addition, we

$$26 + 30 = 56$$

$$56 + 7 = 63$$

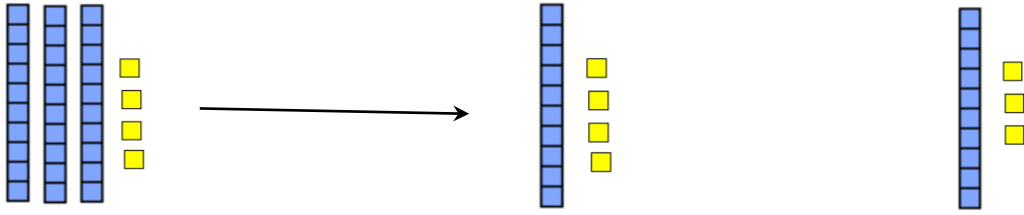
use the ten frames and children use

their knowledge of pairs of numbers (bonds) within 10 and relate this to bonds within 20 (concrete stage)



$10 - 3 = 7$, so $20 - 3 = 17$

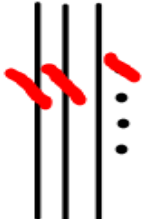
We then teach subtraction using tens and ones (not crossing the tens).



$34 - 21$ $34 - 20 = 14$ $14 - 1 = 13$

Children should subtract the **tens** first, followed by the **ones**.

Once children are confident with solving subtraction problems with these resources they can move on to drawing the tens and ones (not crossing the tens - pictorial):



$34 - 21 = 13$

Once children have understood this, they use their knowledge of related facts: If I know that $3 - 2 = 1$, then I know that $30 - 20 = 10$.

$4 \text{ ones} - 1 \text{ one} = 3 \text{ ones}$

so... $10 + 3 = 13$

Once children are confident with this method they can move on to the part whole method (partitioning) to subtract 2-digit numbers crossing the tens (abstract):

$$\begin{array}{r} 86 \\ - 27 \\ \hline \end{array} = \square$$

$\swarrow \searrow$
 20 7

$86 - 20 = 66$

$66 - 7 = 59$

Please allow children to use resources until they are ready to attempt it without. Please also give your child plenty of opportunities to mentally + and - single digit numbers, crossing the tens boundary. For example:

$23 - 6$ $41 - 5$ $32 - 7$ $59 + 4$