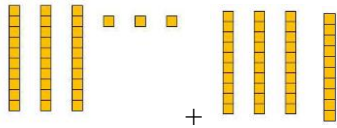
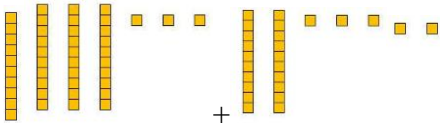


# Addition

Steps for adding multiples of 10, progressing to adding two digit numbers without crossing 10.

## 1. We use concrete resources called dienes, to show the tens and ones.


Eg.  $33 + 40 =$  

$43 + 25 =$  

How many tens all together? How many ones altogether? What number does this make?

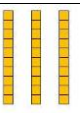

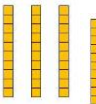
## 2. We progress to drawing the dienes as lines and dots instead.

Eg.  $33 + 40 =$  

$43 + 25 =$  

How many tens all together? How many ones altogether? What number does this make?

## 3. Progress to a formal written method alongside images.

| Tens  | Ones  |
|---|---|
|  |  |
|  |   |

|   |       |       |
|---|-------|-------|
|   | 3     | 3     |
| + | 4     | 0     |
|   | <hr/> | <hr/> |
|   | 7     | 3     |

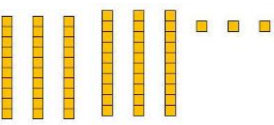
|   |       |       |
|---|-------|-------|
|   | 4     | 3     |
| + | 2     | 5     |
|   | <hr/> | <hr/> |
|   | 6     | 8     |

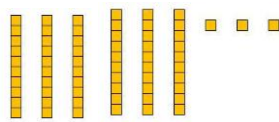
## 4. Progress to adding mentally, add the tens and add the ones and combine together.

# Subtraction

Steps for subtracting multiples of 10, progressing to subtracting two digit numbers without crossing 10.

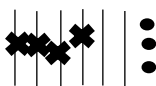
**1. We use concrete resources called dienes, to show the tens and ones.**

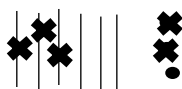
Eg.  $63 - 40 =$   (Take four tens away)

$63 - 32 =$   (Take away two ones, take away three tens)

How many tens left? How many ones left? What number does this make?

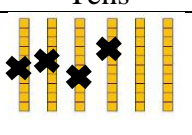
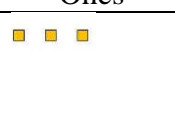
**2. We progress to drawing the dienes as lines and dots instead.**

Eg.  $63 - 40 =$  

$63 - 32 =$  

How many tens left? How many ones left? What number does this make?

**3. Progress to a formal written method alongside images.**

| Tens  | Ones  |
|---|---|
|  |  |

|   |   |   |
|---|---|---|
|   | 6 | 3 |
| - | 4 | 0 |
|   | 2 | 3 |

|   |   |   |
|---|---|---|
| . | 6 | 3 |
| - | 3 | 2 |
|   | 3 | 1 |

**4. Progress to subtracting mentally, take away the one, take away the tens and see what is left.**