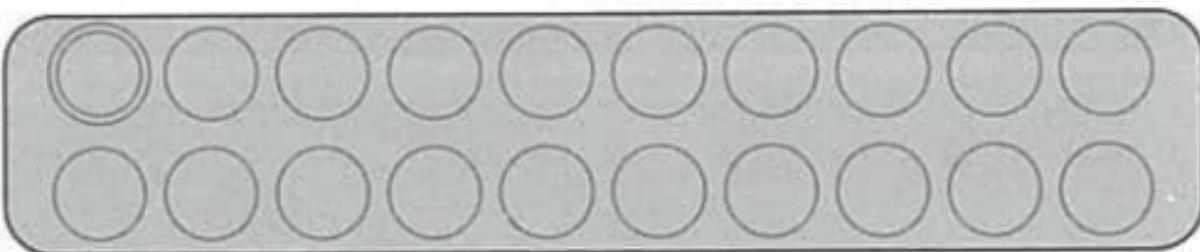
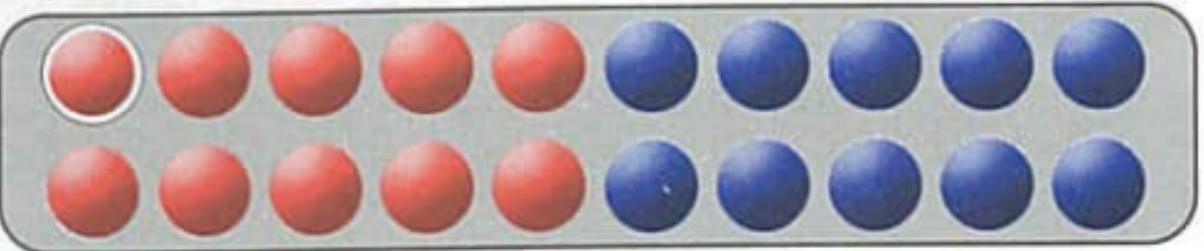


# D SCHUBI abaco 20 - der Zählrahmen mit dem genialen Dreh

# C

**SCHUBI abaco 20** ist ein vielseitiges Rechengerät für die ersten Schuljahre. Operationen lassen sich auf anschauliche Weise darstellen, durchführen und üben. **SCHUBI abaco 20** passt zu jeder Methode und lässt sich begleitend zu jedem Lehrgang einsetzen.

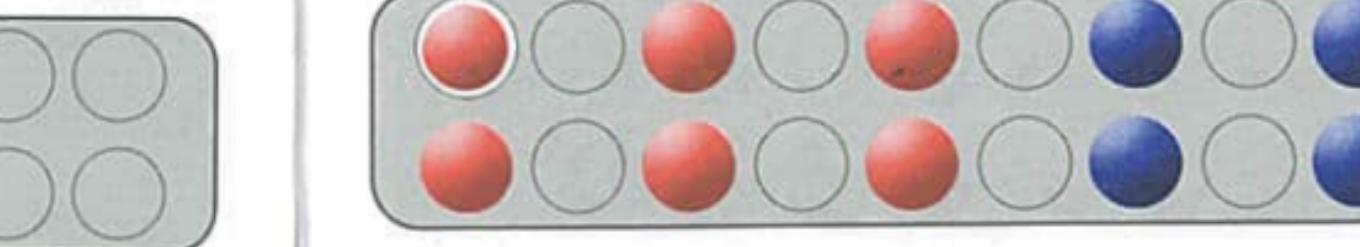
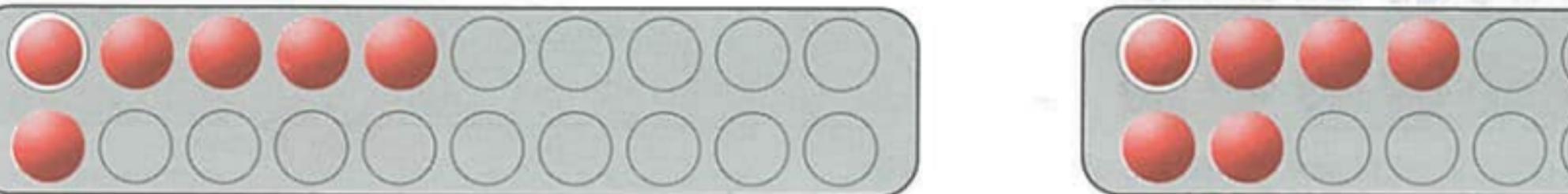
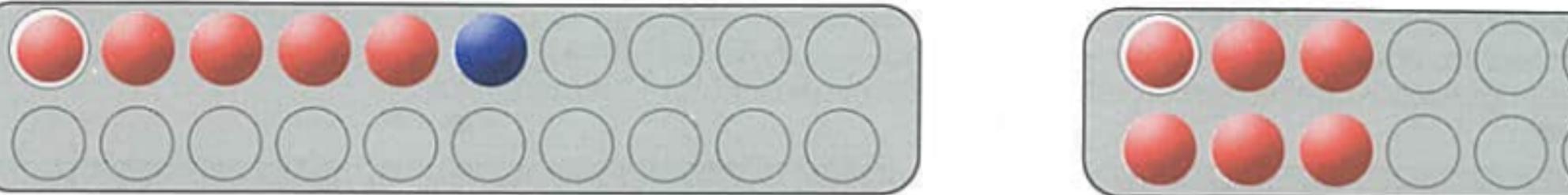
Die Arbeit mit **SCHUBI abaco 20** besteht im Hervorholen und Verschwindenlassen roter und blauer Kugelhälften. Streicht man mit dem Finger von links nach rechts, erscheinen die „aktiven“ roten und blauen Kugelhälften. Bei der Gegenbewegung von rechts nach links werden die neutralen grauen Kugelhälften sichtbar. Sie stellen lediglich die Platzhalter dar.



Achtung: Die mit einem Ring gekennzeichnete Kugel soll oben links liegen.

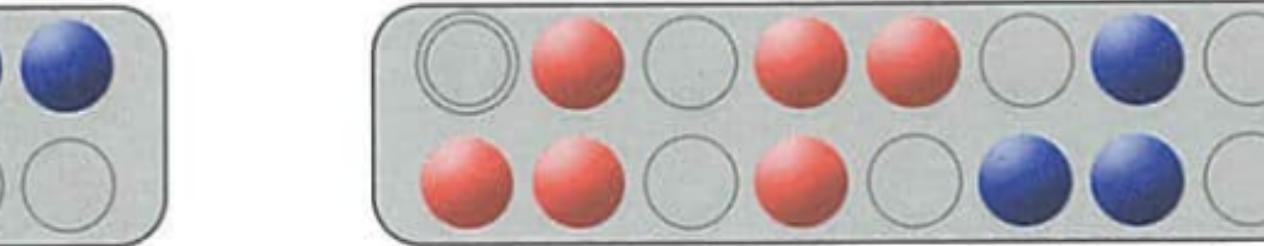
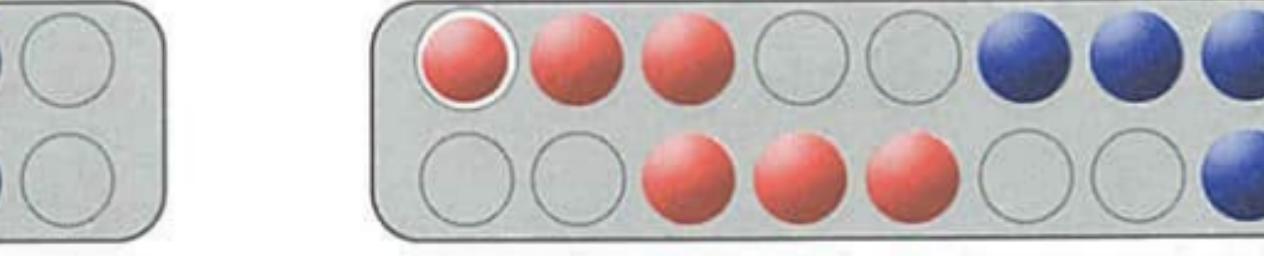
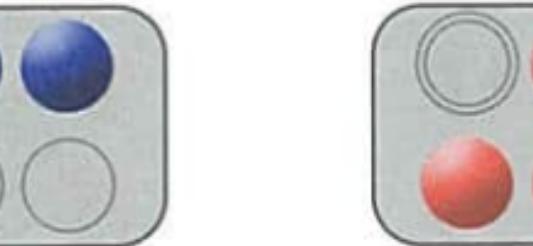
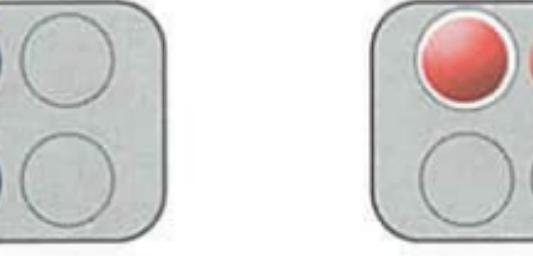
Die **Zahlmengen** des Zahlenraumes bis 20 lassen sich an jeder beliebigen Stelle des **SCHUBI abaco 20** aufbauen. Dies ermöglicht verschiedene Darstellungen der gleichen Menge.

#### Beispiel Menge 6

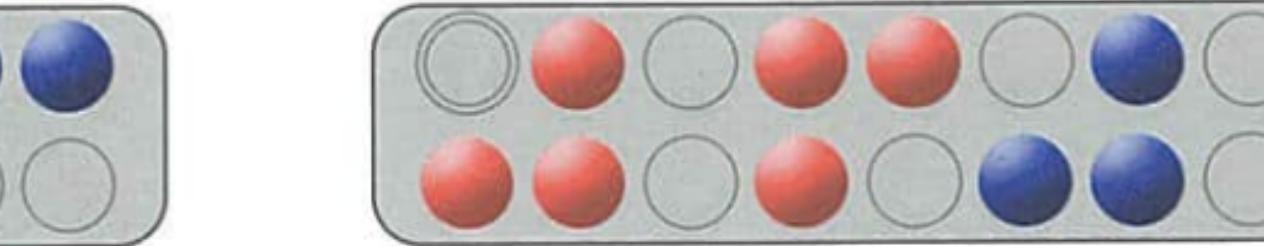
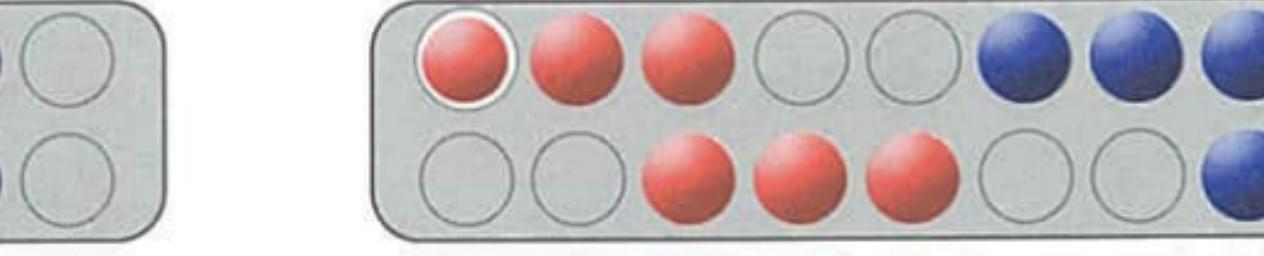
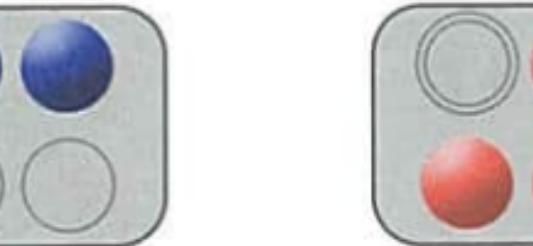
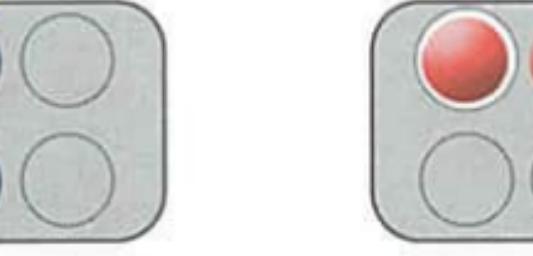


Mit dem **SCHUBI abaco 20** lassen sich **Zahlengruppen** in verschiedener Anordnung darstellen. Hier je zwei Beispiele für Zweier- und für Dreiergruppierung:

#### 2er-Gruppen

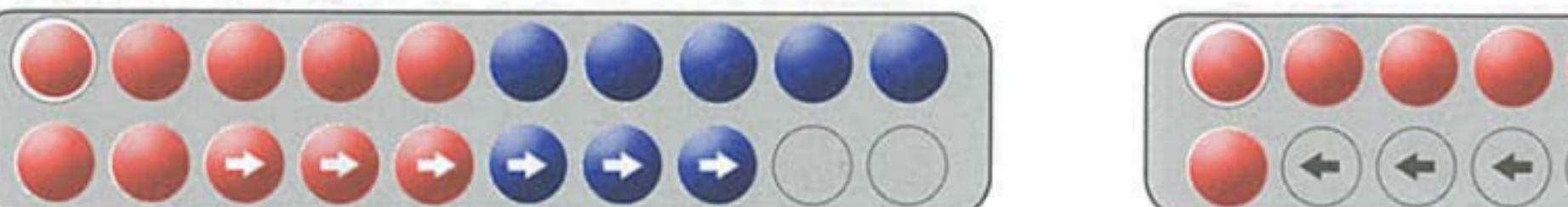
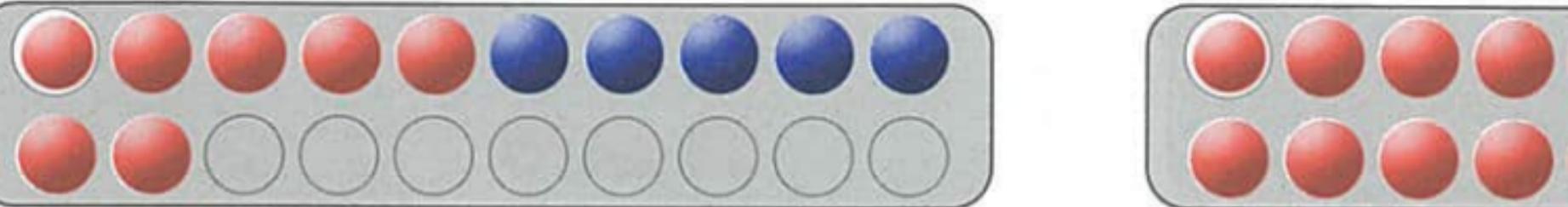


#### 3er-Gruppen

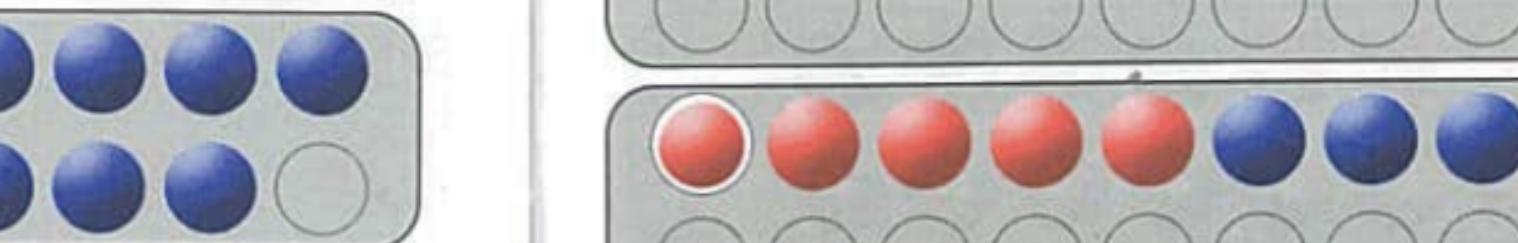


**Rechenoperationen** darstellen – einfach, klar und einleuchtend. Es werden nur die Kugelhälften aktiviert, die tatsächlich für die Operationen benötigt werden. Alle anderen Kugelhälften bleiben in der Neutralstellung (grau).

$12 + 6 = \square$

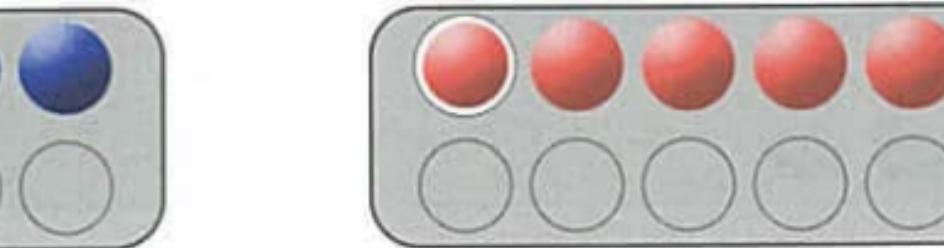
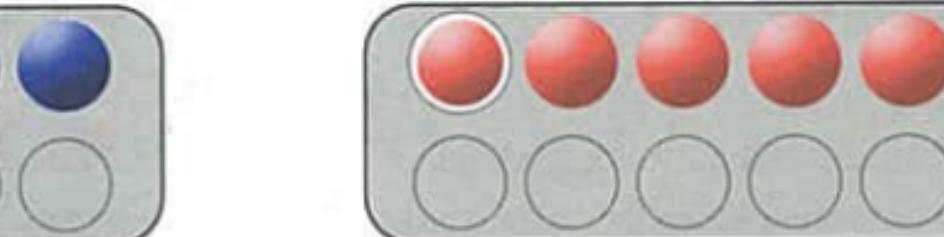
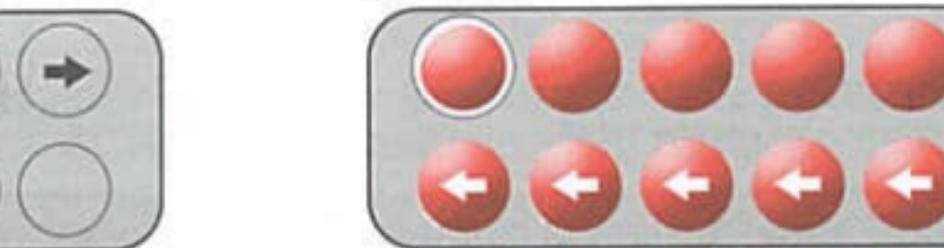


$19 - 8 = \square$

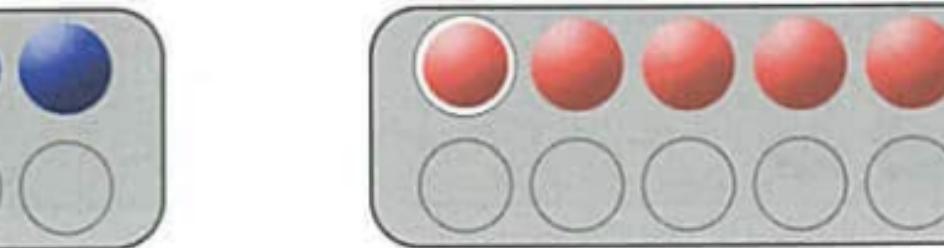
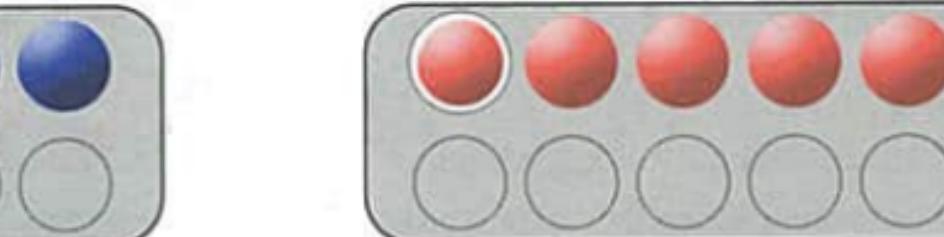
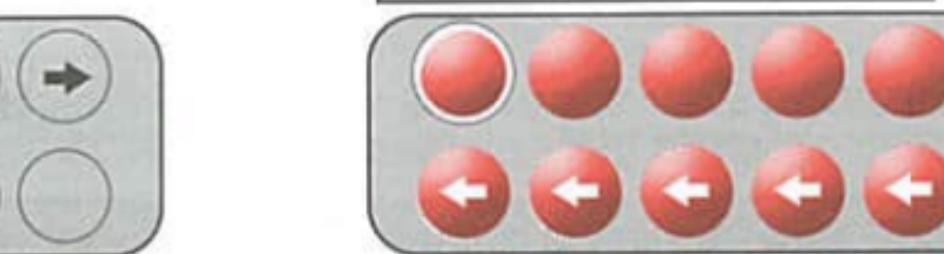


### Überschreiten des Zehners:

$8 + 6 = \square$

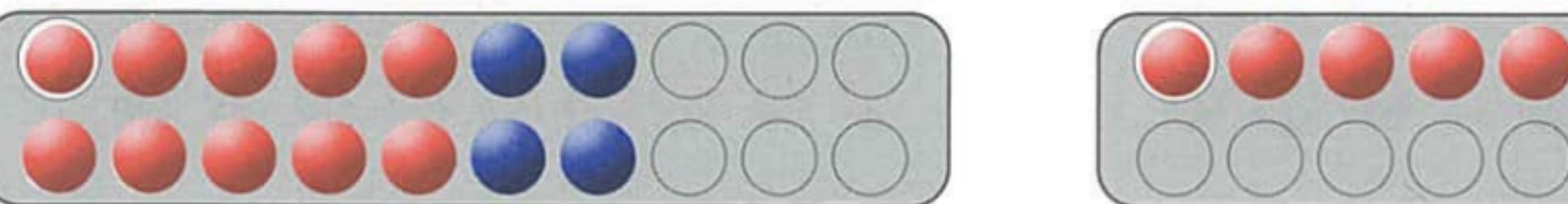
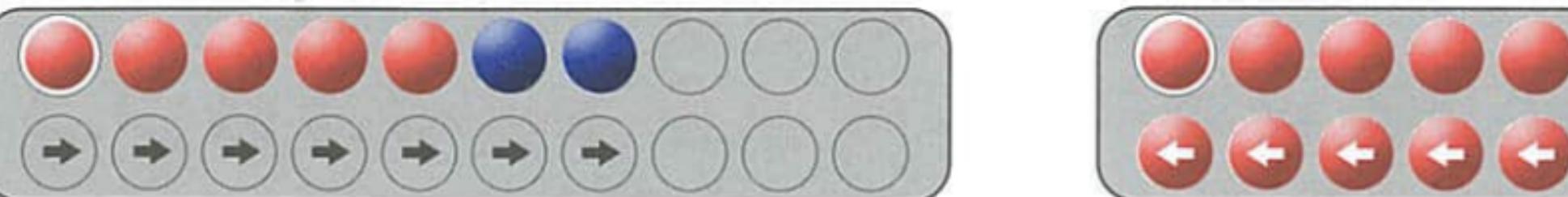


$17 - 8 = \square$

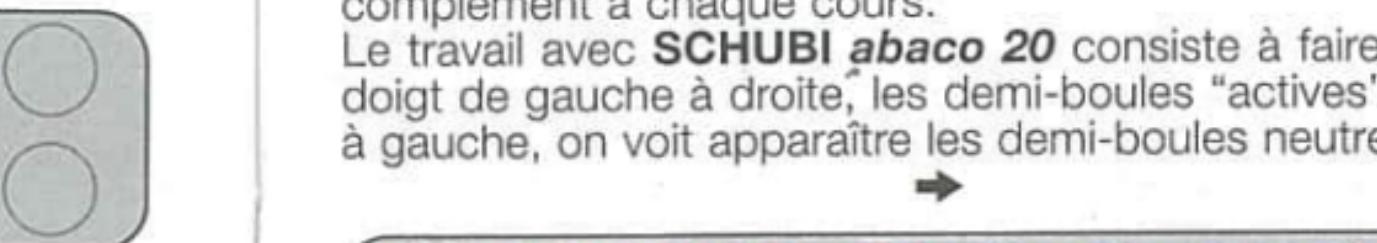


Beim **Verdoppeln und Halbieren** von Zahlmengen lässt sich die Parallelität der beiden Zehner ausnutzen:

### Verdoppeln der Zahlmenge 7



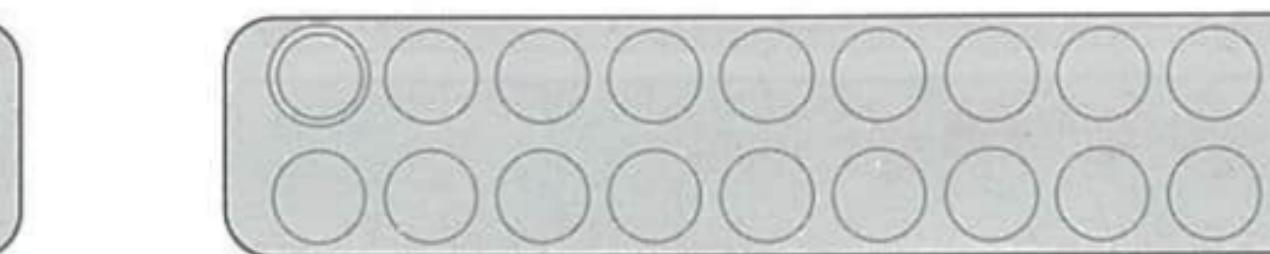
### Halbieren der Zahlmenge 18



## F SCHUBI abaco 20 - C Le boulier au coup de pouce génial!

SCHUBI abaco 20 est un appareil à calculer à usage multiple pour les premières années scolaires. Les opérations sont présentées, faites et exercées sous une forme concrète. SCHUBI abaco 20 convient à chaque méthode et peut être utilisé comme complément à chaque cours.

Le travail avec SCHUBI abaco 20 consiste à faire apparaître et disparaître les demi-boules rouges et bleues. En y passant le doigt de gauche à droite, les demi-boules "actives" rouges et bleues apparaissent. En faisant le mouvement contraire de droite à gauche, on voit apparaître les demi-boules neutres grises. Elles marquent uniquement l'emplacement.

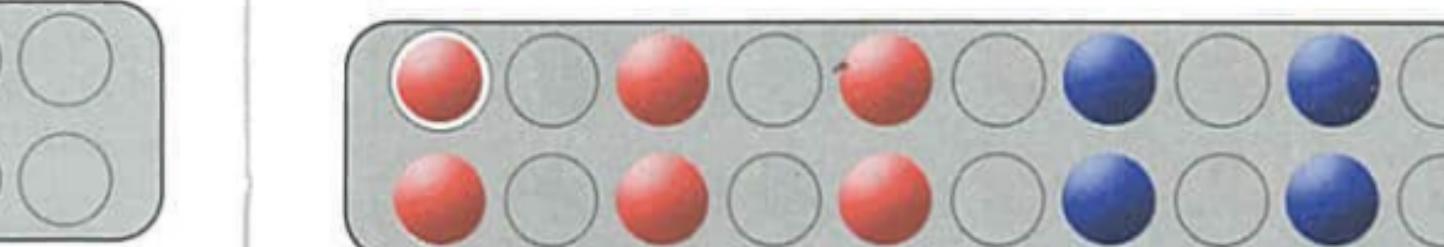
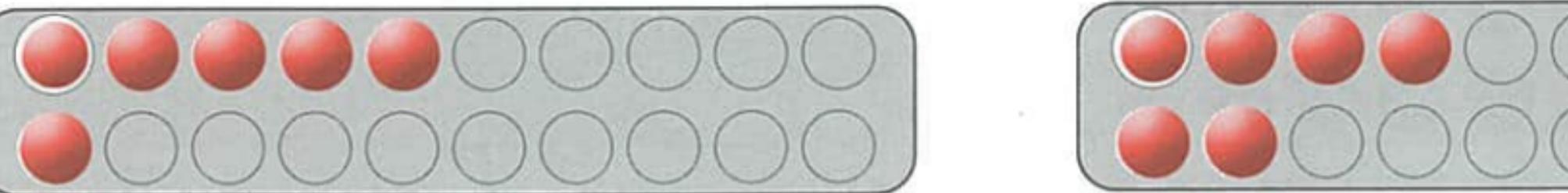
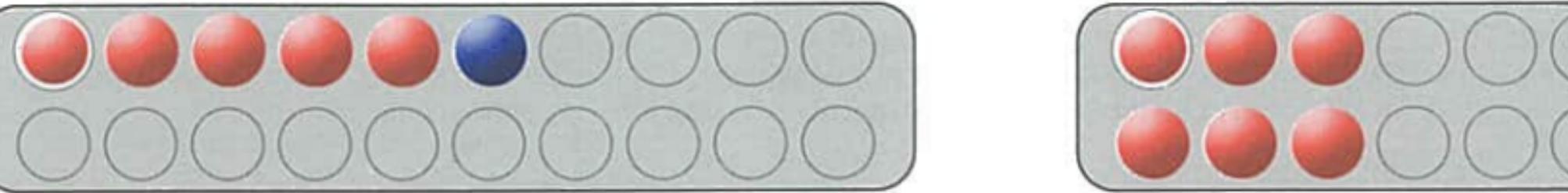


Attention: La boule entourée d'un cercle doit se trouver en haut.

224 60 C

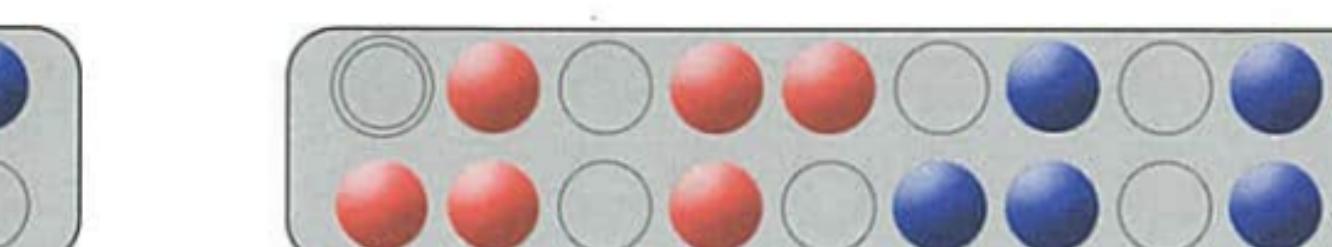
**Les nombres** s'étendant jusqu'à 20 peuvent être disposés n'importe où sur le **SCHUBI abaco 20** ; ce qui permet les différentes présentations du même nombre.

#### Exemple: nombre 6

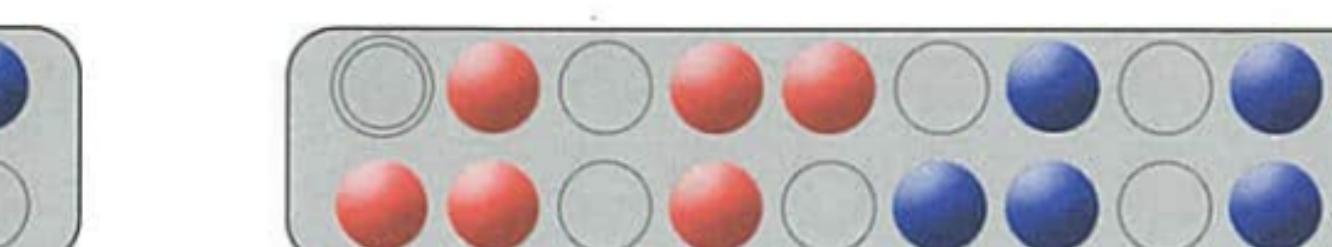


**SCHUBI abaco 20** permet de présenter **les séries de chiffres** dans des ordres différents. Voici deux exemples pour les séries de deux ou trois chiffres:

#### Séries de 2

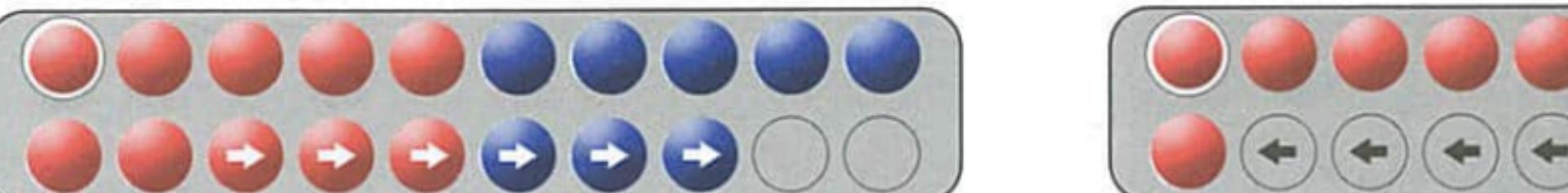
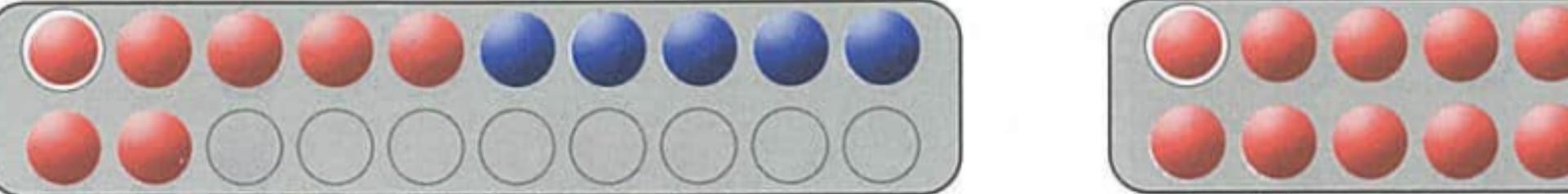


#### Séries de 3

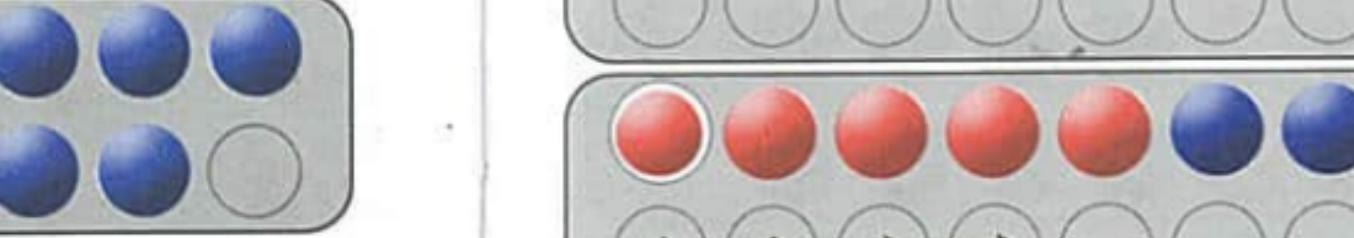


Présentation claire, facile et compréhensible des **opérations de calcul**: seules les demi-boules nécessaires à l'opération sont mises en mouvement. Toutes les autres demi-boules restent en position neutre (gris).

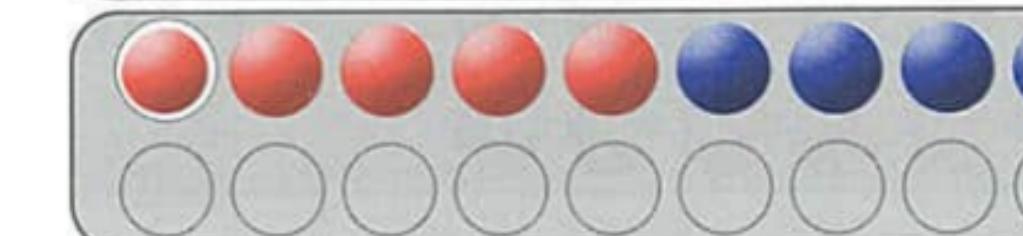
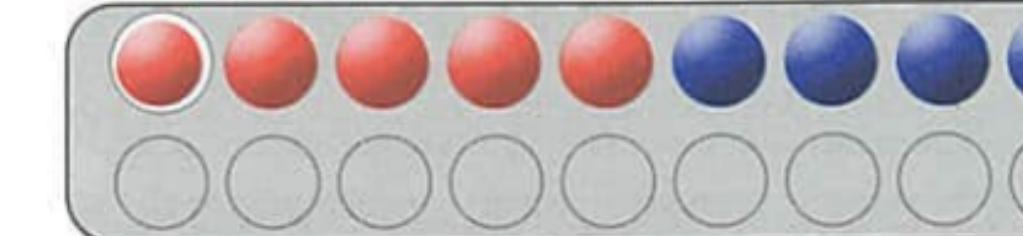
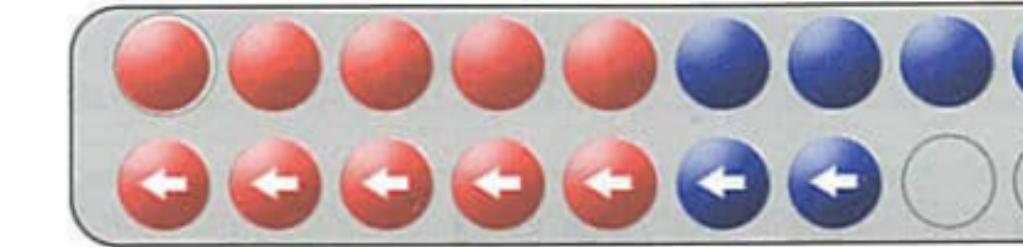
$12 + 6 = \square$



10 of 10

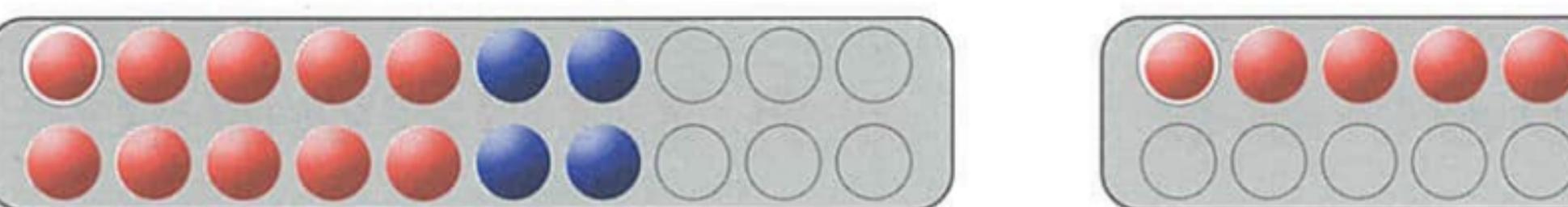


$17 - 8 = \square$



En **doublant ou divisant** un nombre, le parallélisme des deux dizaines du **SCHUBI abaco 20** pourra bien être mis à profit:

**Multiplication par 2 du nombre 7**



**Division par 2 du nombre 18**



I

C

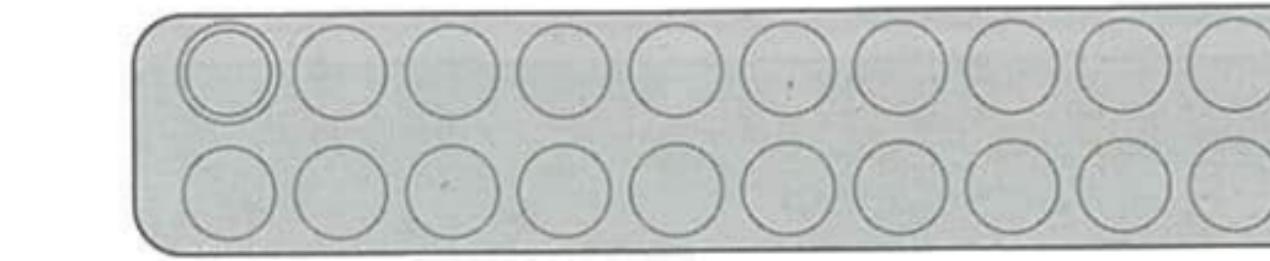
**SCHUBI abaco 20 -**

**il pallottoliere con lo scambio geniale**

**C**

**SCHUBI abaco 20** è un pallottoliere molto versatile per i primi anni di scuola. Con **SCHUBI abaco 20** le operazioni matematiche vengono illustrate, eseguite ed esercitate in modo estremamente chiaro. **SCHUBI abaco 20** può adattarsi ad ogni metodo e può essere applicato parallelamente ad ogni corso.

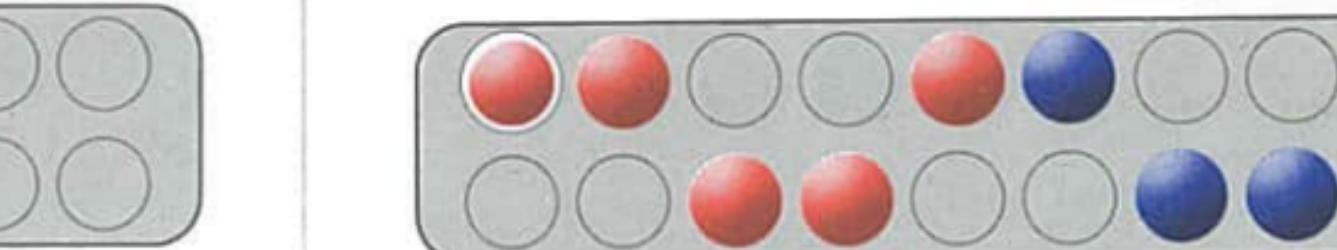
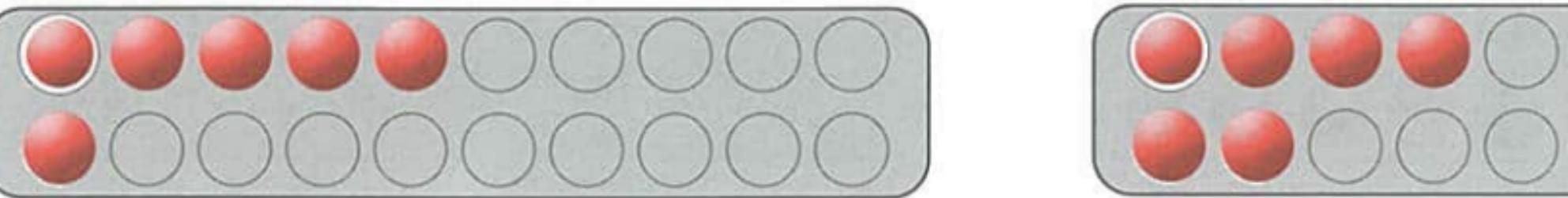
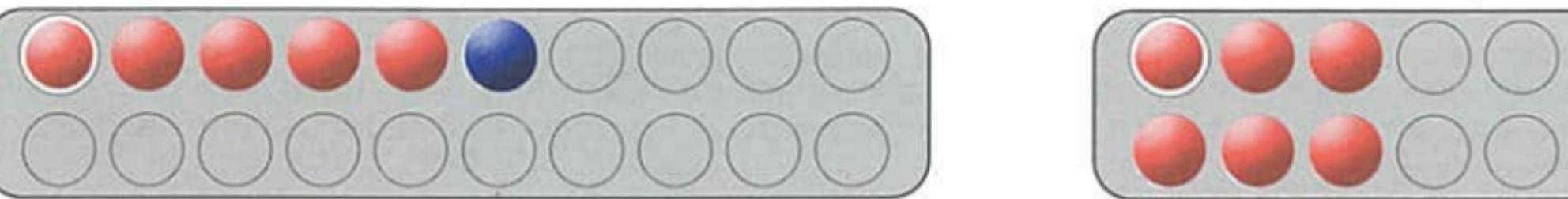
Il lavoro con **SCHUBI abaco 20** consiste nel tirar fuori e far sparire la metà delle palline rosse e blu. Toccando leggermente con le dita le palline da sinistra verso destra appare la metà "attiva" delle palline (parte rossa e parte blu delle palline), con il movimento contrario da destra verso sinistra, diventano visibili le metà sfere grigie (neutre) che indicano solo la disposizione dei posti.



Attenzione: La pallina segnata da un cerchio deve trovarsi sempre a sinistra.

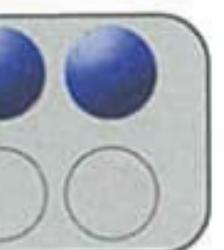
La quantità dei **numeri fino a 20** può essere disposta in qualsiasi punto di **SCHUBI abaco 20** e rende possibili diverse raffigurazioni dello stesso numero.

### Esempio: raffigurazione del numero 6



Con **SCHUBI abaco 20 gruppi di numeri** si possono presentare in disposizioni diversi.  
Due esempi per i gruppi a due ed a tre.

### Gruppi a 2

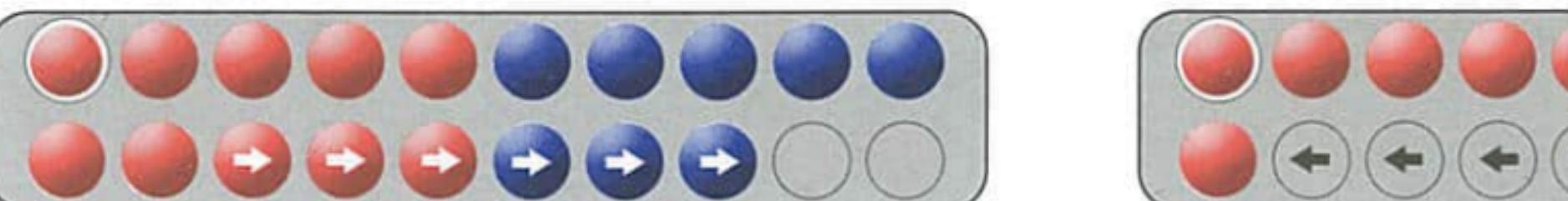
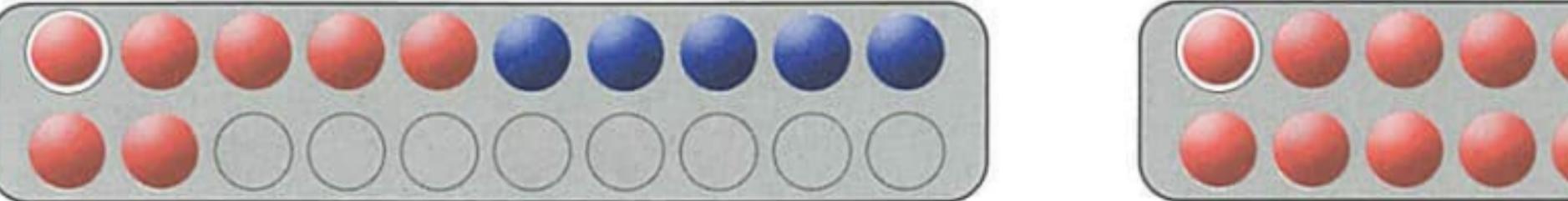


### Gruppi a 3

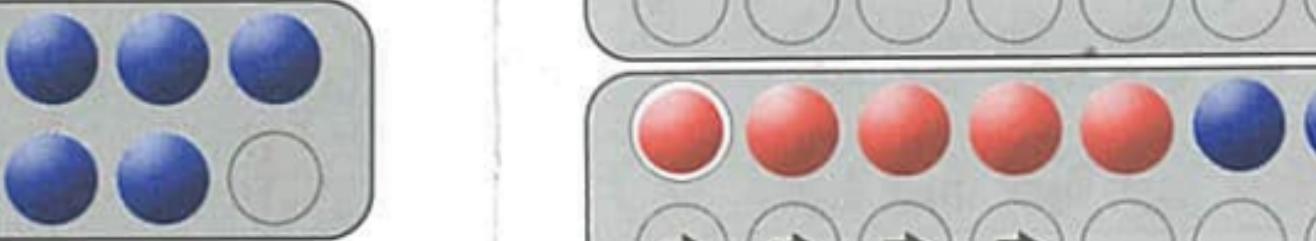


Per **le operazioni matematiche** devono essere attivate soltanto le palline indispensabili, tutte le altre palline rimangono nella posizione neutra (grigia)

$12 + 6 = \square$

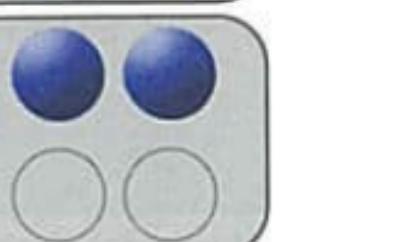
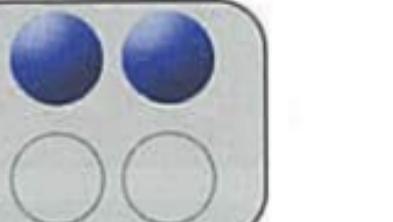
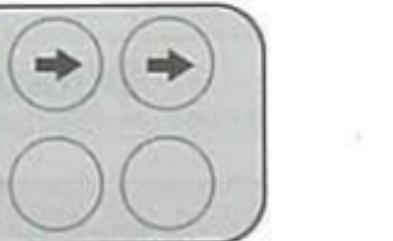


$19 - 8 = \square$

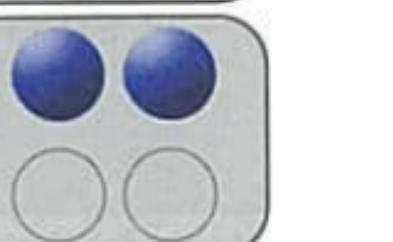
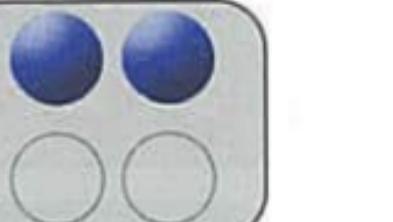
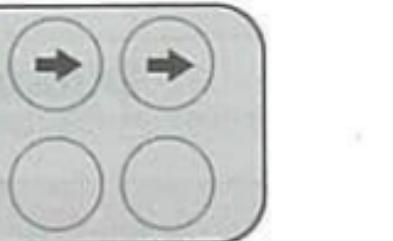


### Attraversare il 10:

$8 + 6 = \square$

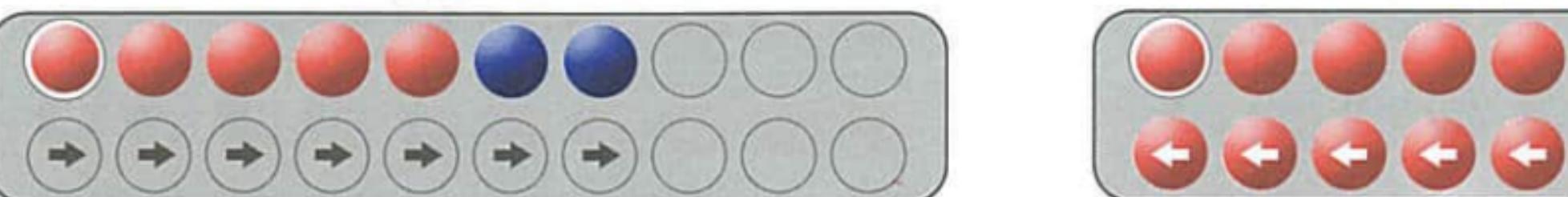


$17 - 8 = \square$

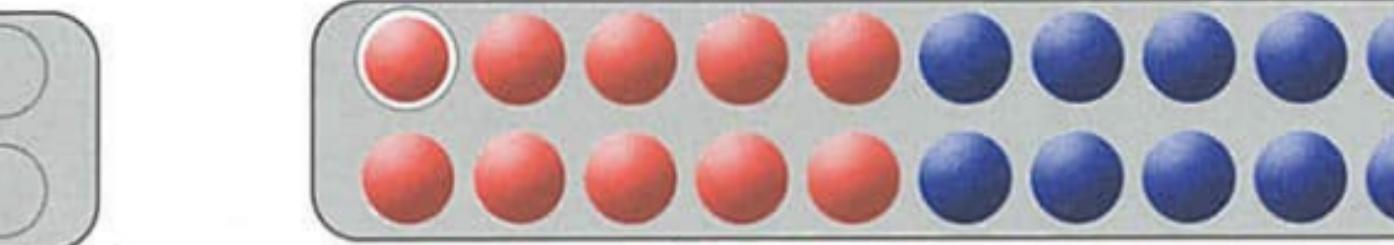
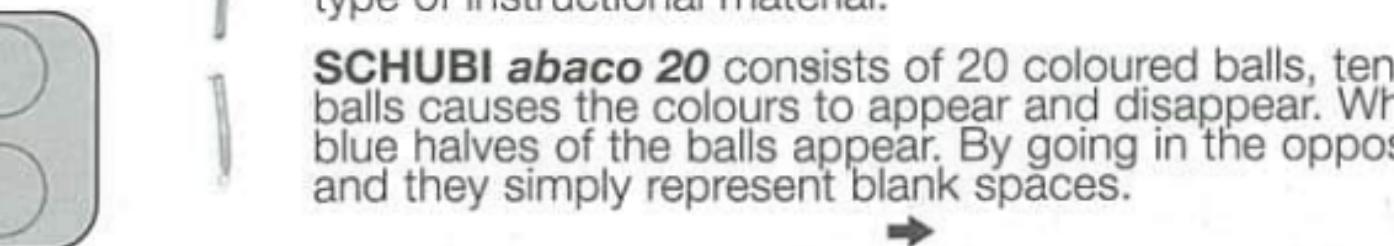


Per **raddoppiare** e per **dimezzare** la quantità dei numeri, si può approfittare della parallelità dei due dieci dello **SCHUBI abaco 20**.

### Raddoppiare la quantità del 7



### Dimezzare la quantità del 18



**GB**

**SCHUBI abaco 20 -**

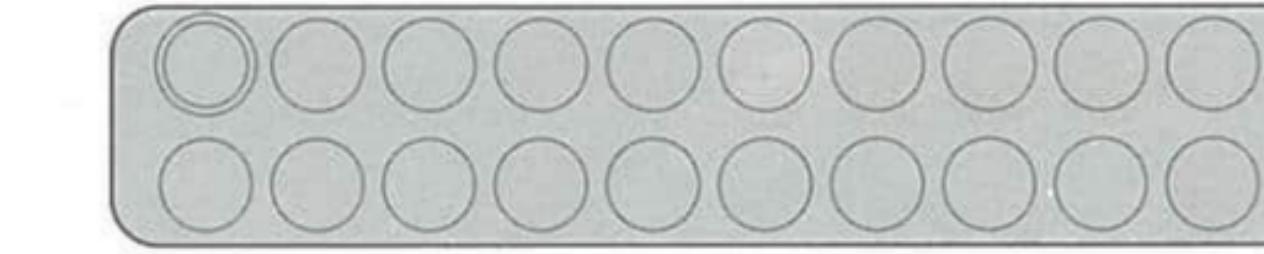
**C**

**the counting frame with the super roll**

**224 60 C**

**SCHUBI abaco 20** is a versatile tool for use in arithmetic classes in the first years of school. Calculations can be displayed, carried out and practiced visually. **SCHUBI abaco 20** is suitable to use with all teaching methods and can be combined with every type of instructional material.

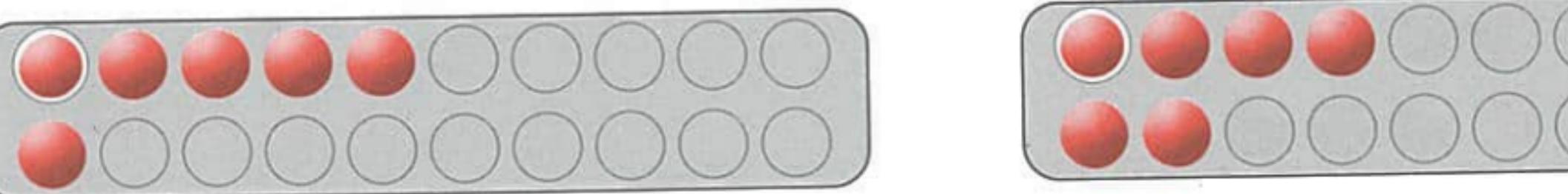
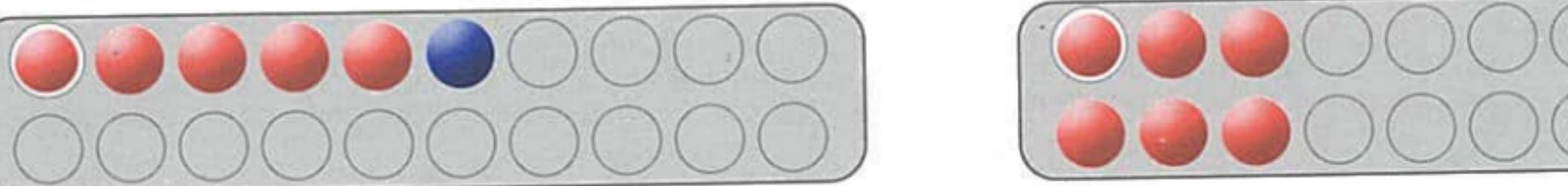
**SCHUBI abaco 20** consists of 20 coloured balls, ten are half red/half grey and the other ten are half blue half grey. Rotating the balls causes the colours to appear and disappear. When the balls are touched with the finger from left to right the "active" red or blue halves of the balls appear. By going in the opposite direction, from right to left, the neutral, grey halves of the balls appear; and they simply represent blank spaces.



Attention: The ball with the ring around it should be on the top left.

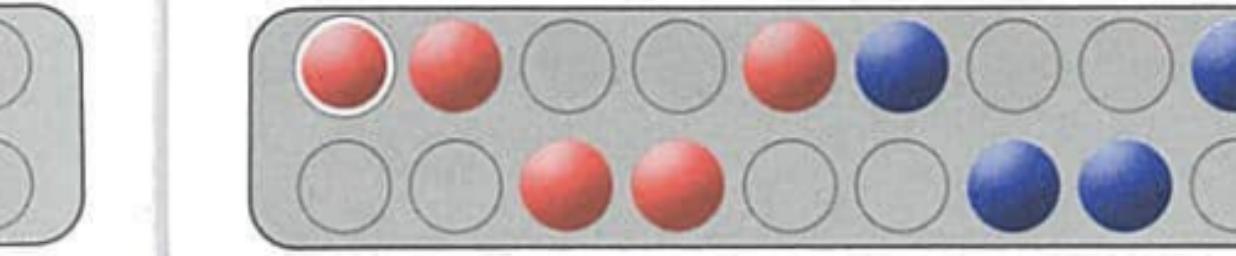
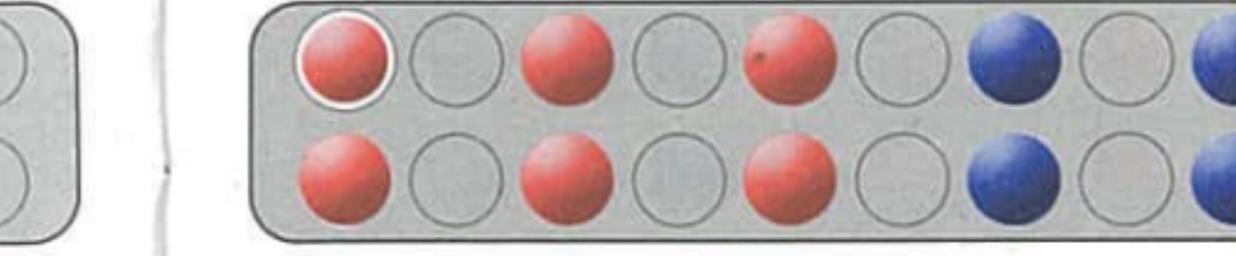
**Amounts up to 20** can be set up in any desired position on the **SCHUBI abaco 20**. This makes it possible to represent the same amount in different ways.

E.g. amount of 6

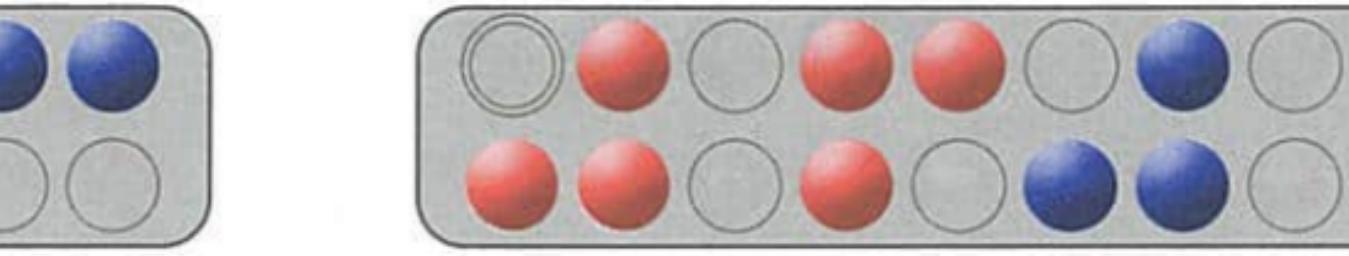
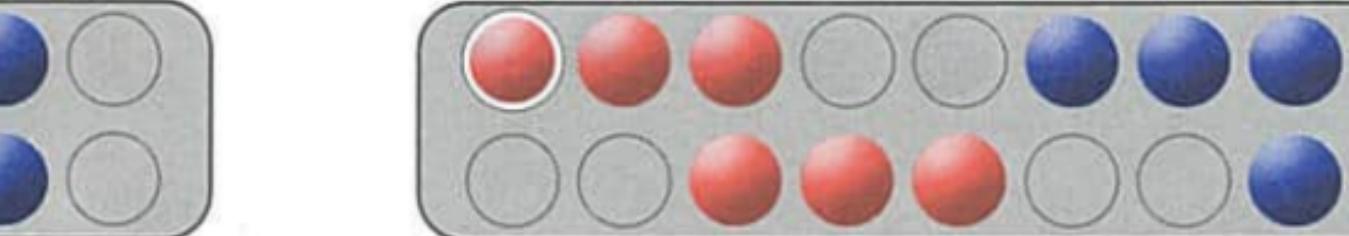


With **SCHUBI abaco 20 groups of numbers** can be presented in different arrangements. Here are two examples of groups of two and groups of three:

Groups of 2



Groups of 3



**Arithmetic problems** are presented simply, clearly and are easily understood because only those balls actually needed for the calculation are activated. All the other balls remain in the neutral position (grey).

**Going above 10:**

**Going below 10:**

$12 + 6 = \square$

$19 - 8 = \square$

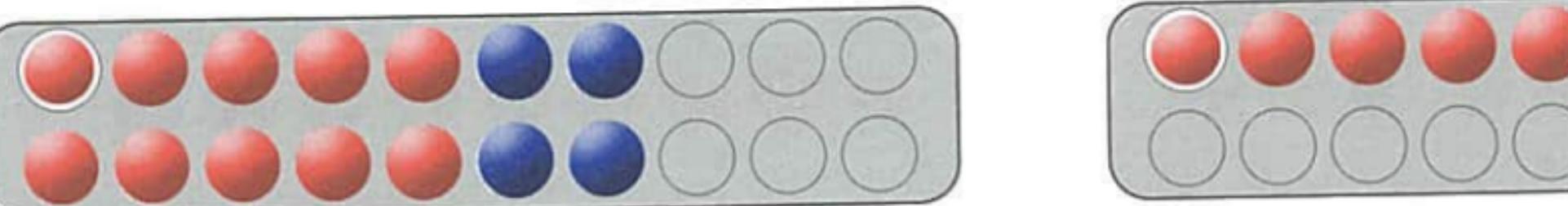
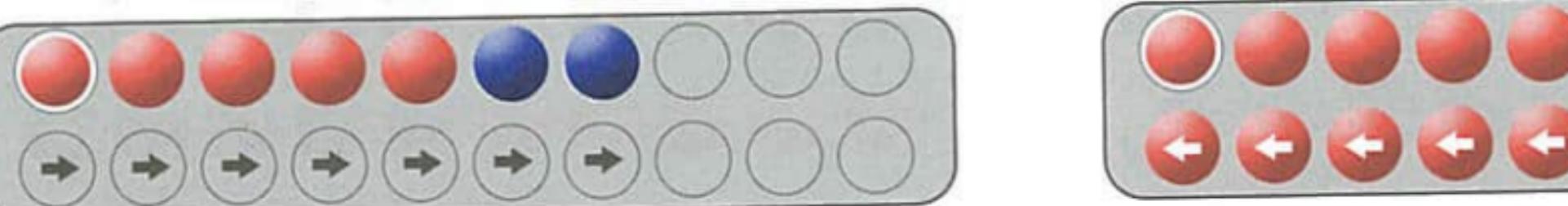
$8 + 6 = \square$

$17 - 8 = \square$

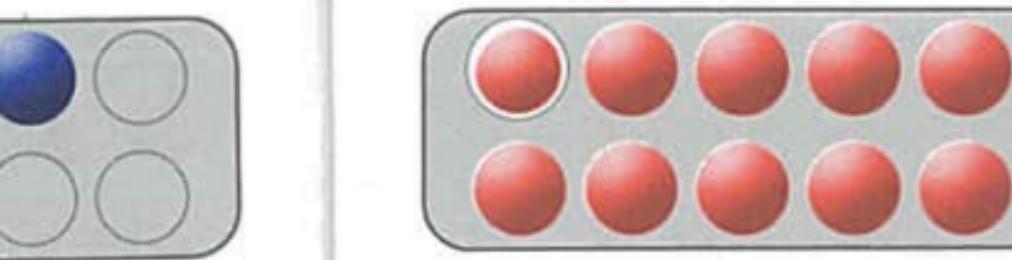
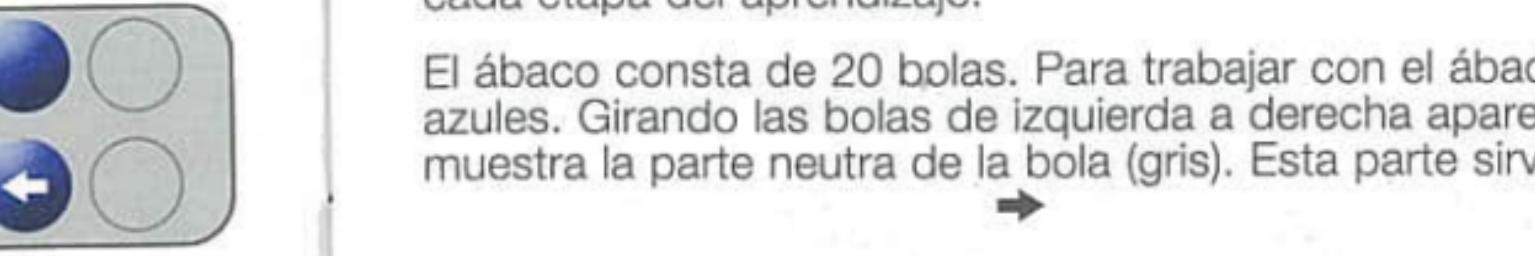
The image displays four rows of an abacus-like tool for arithmetic. Each row consists of a grey frame containing 10 circular positions. Red and blue balls are placed in specific positions to represent numbers and perform operations. The first row (top) represents the problem  $12 + 6 = \square$ , with 12 red balls in the first two columns and 6 blue balls in the next two columns. The second row represents  $19 - 8 = \square$ , with 19 red balls in the first two columns and 8 blue balls in the next two columns. The third row represents  $8 + 6 = \square$ , with 8 red balls in the first two columns and 6 blue balls in the next two columns. The fourth row represents  $17 - 8 = \square$ , with 17 red balls in the first two columns and 8 blue balls in the next two columns. Below each row is a set of numbered arrows (1 through 10) pointing either right or left, likely used for counting or as part of a game.

When **halving and doubling amounts** the parallel construction of the red and white groups of balls in **SCHUBI abaco 20** is especially useful.

### Doubling 7



### Halving 18



## E

## SCHUBI abaco 20 -

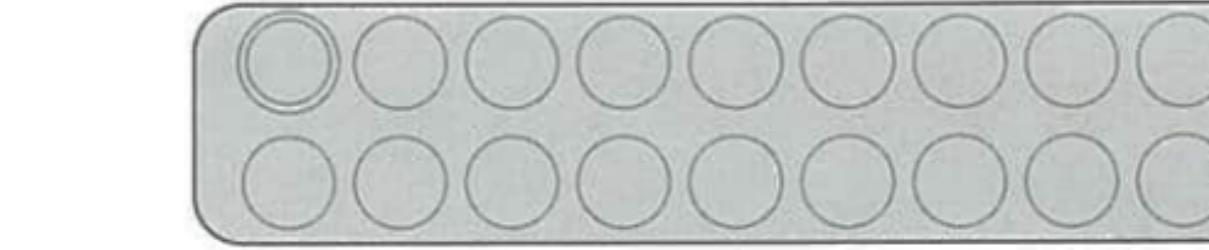
## la regla de cálculo con el original giro

## C

224 60 C

El **SCHUBI abaco 20** es una calculadora multilateral, para los primeros años de escuela, que permite hacer, practicar y representar operaciones aritméticas de una forma visual. El **SCHUBI abaco 20** se adapta a cada método y puede ser utilizado en cada etapa del aprendizaje.

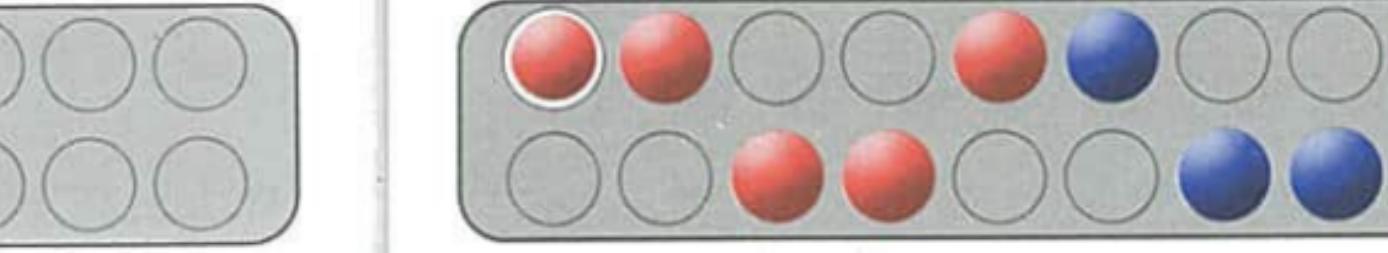
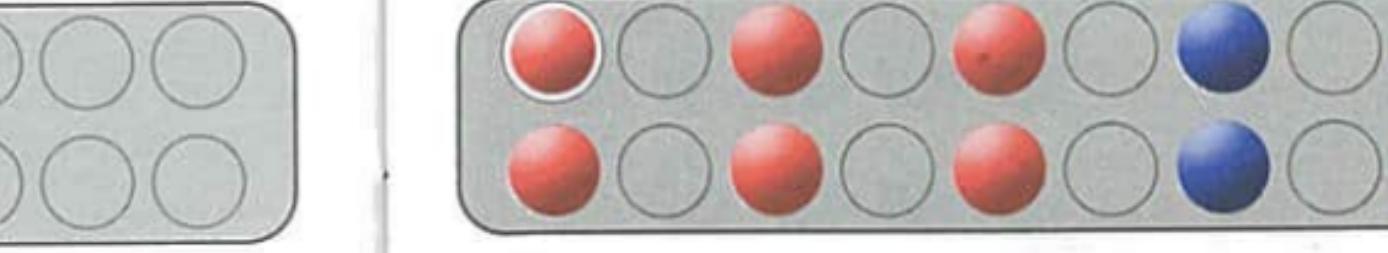
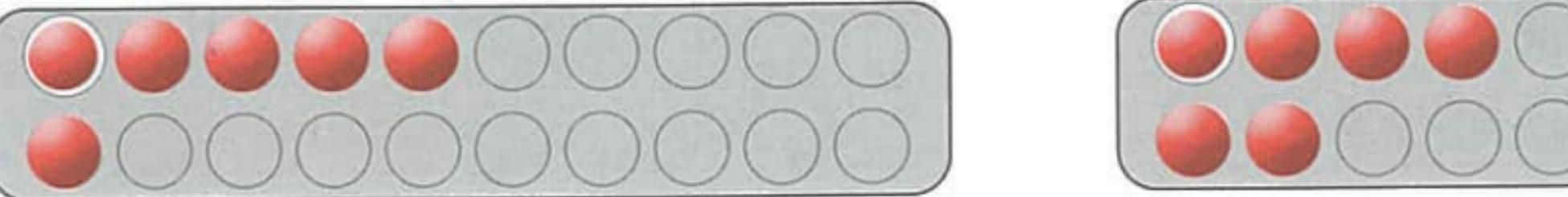
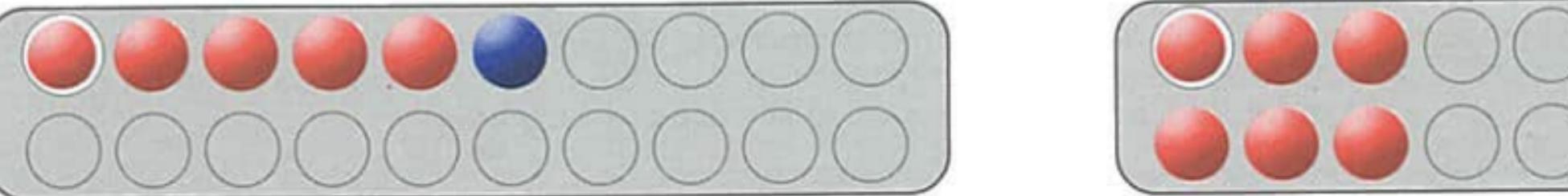
El ábaco consta de 20 bolas. Para trabajar con el ábaco SCHUBI, se hacen aparecer y desaparecer las medias bolas rojas y azules. Girando las bolas de izquierda a derecha aparecen los colores "activos" rojo y azul. Un giro en sentido contrario nos muestra la parte neutra de la bola (gris). Esta parte sirve simplemente para señalar los emplazamientos.



Atención: La bola marcada con el circulo debe estar arriba a la izquierda.

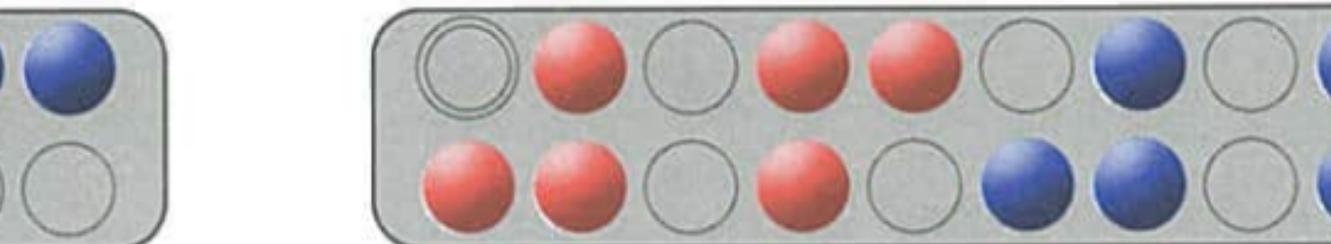
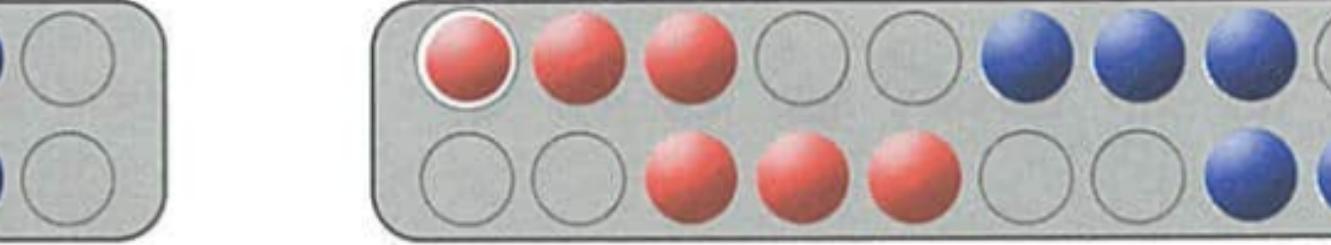
Cada **conjunto de números** dentro del rango de 0 a 20 pueden ser representando en cualquier lugar del abaco. Esto permite visualizar de diferentes formas el mismo conjunto.

#### Por ejemplo el conjunto 6

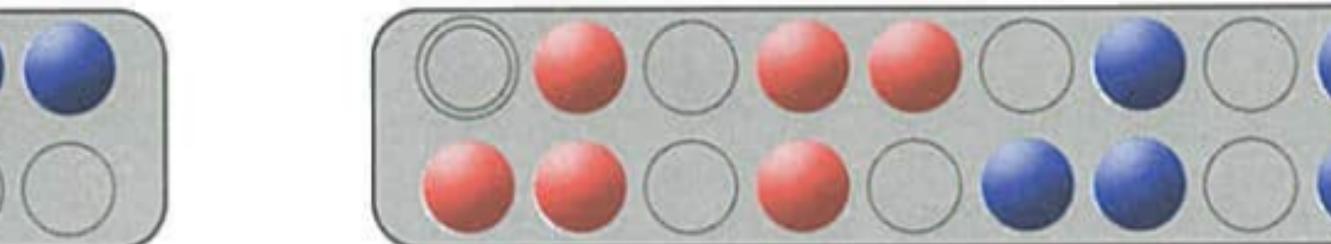
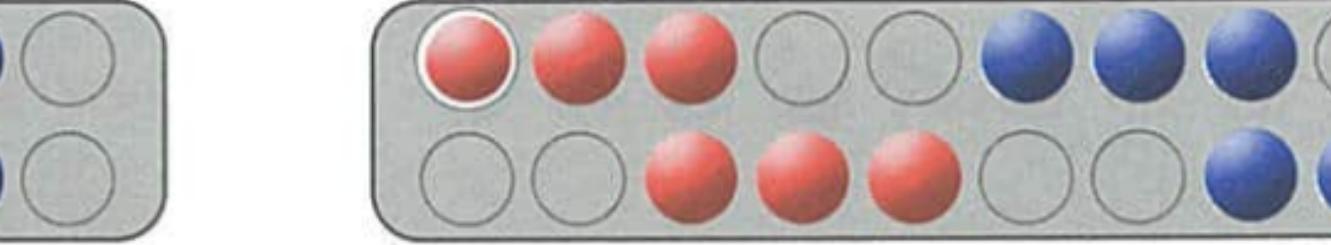


Con el **SCHUBI abaco 20** se quedan representar grupos de números de formas diferentes. Los dos ejemplos siguientes nos muestran algunas posibilidades de agrupación en grupos de dos y tres:

#### Agrupaciones de 2

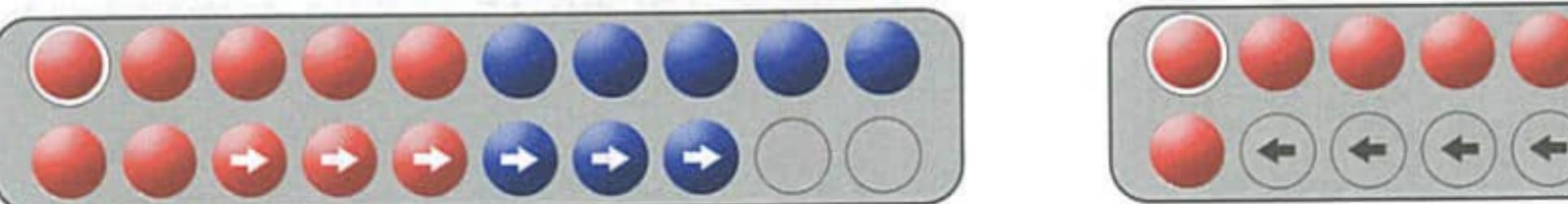
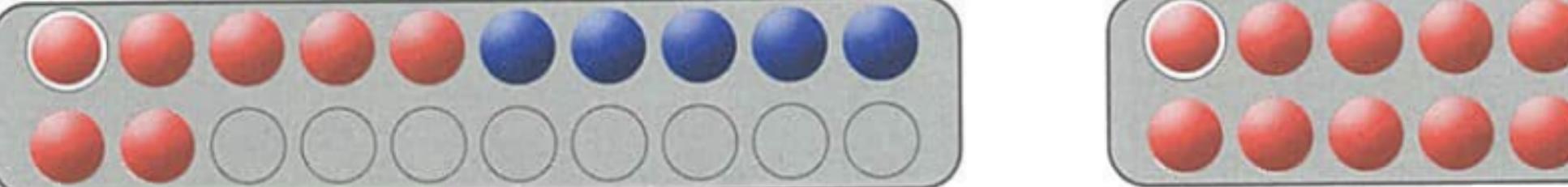


#### Agrupaciones de 3

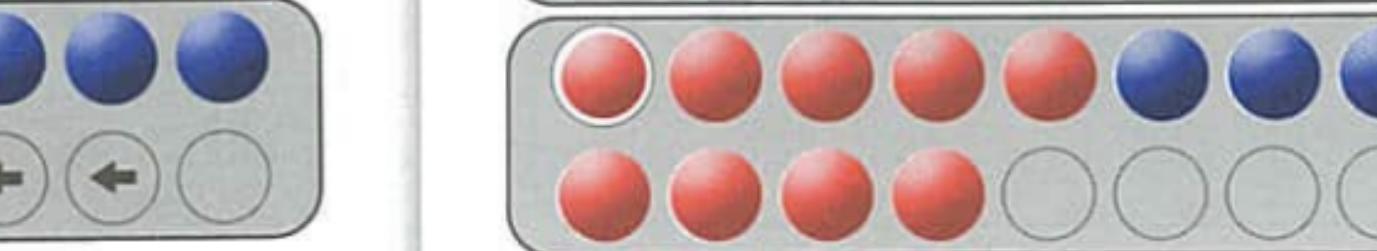
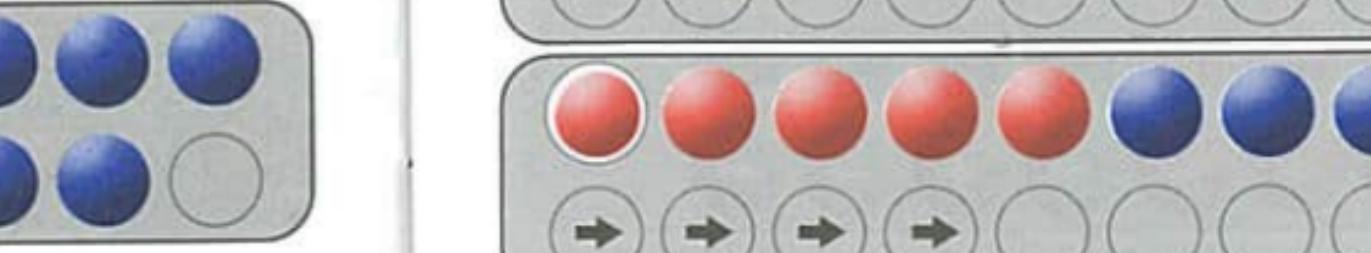


**Operaciones aritméticas** – simples, claras y comprensibles: Sólo se activan las medias bolas que realmente se necesitan para hacer las operaciones. Las otras quedan en posición neutra (gris).

$12 + 6 = \square$



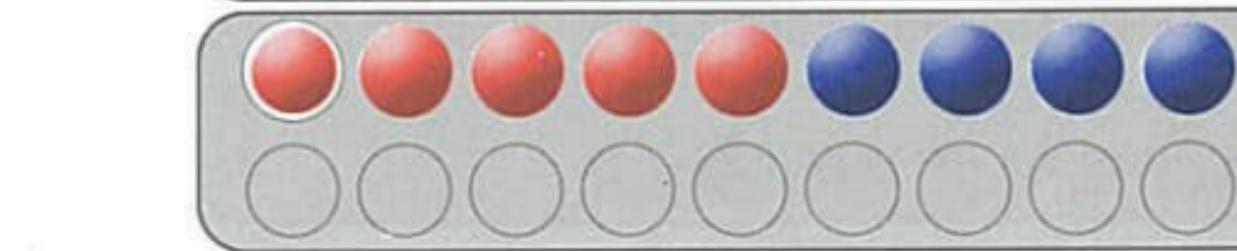
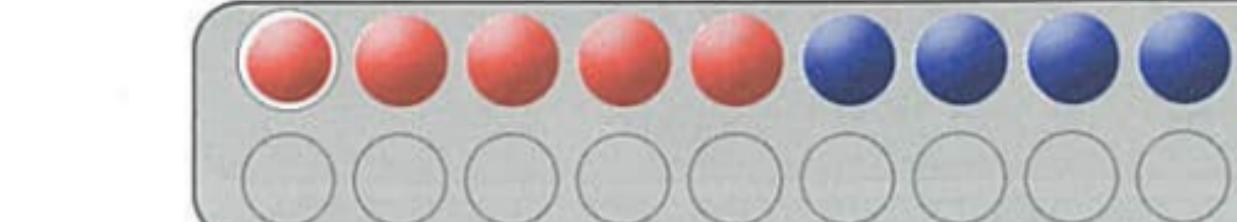
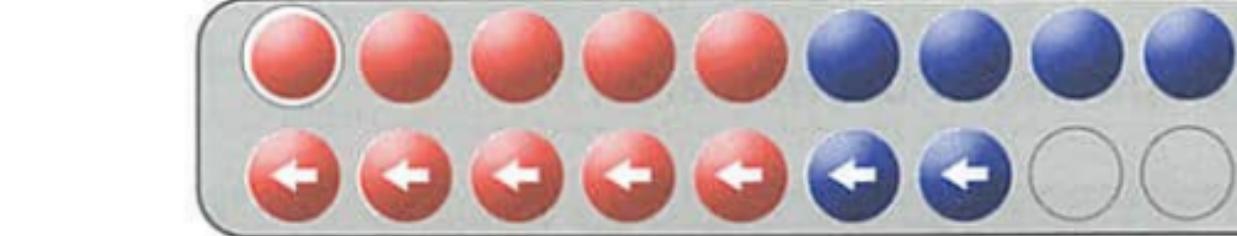
$19 - 8 = \square$



### Franquear la cifra 10:

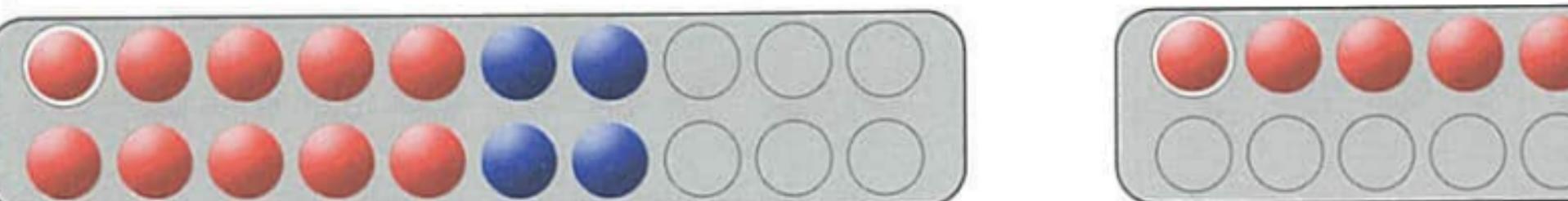
$8 + 6 = \square$

$17 - 8 = \square$

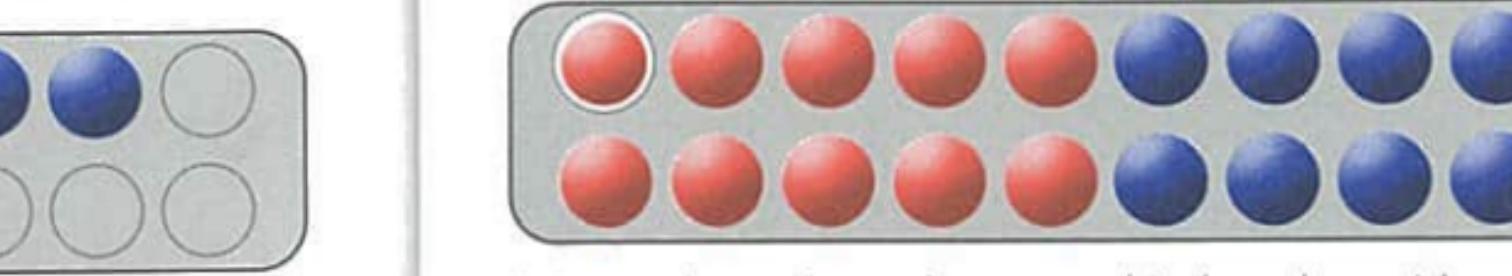
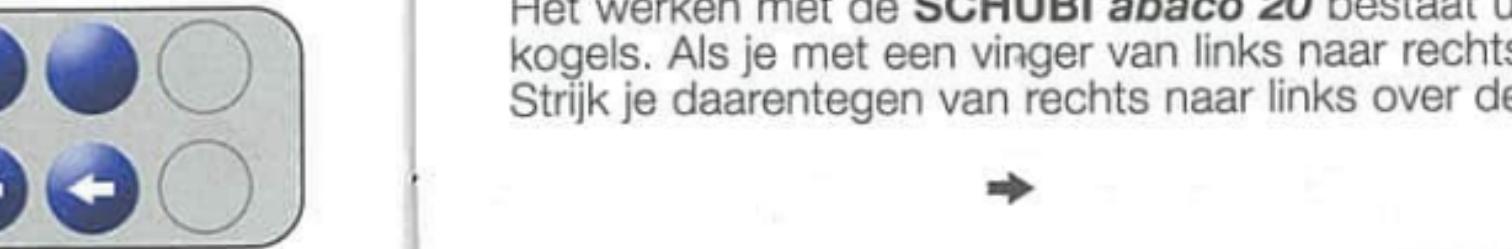


El paralelismo entre las dos decenas del **SCHUBI abaco 20** es de gran utilidad en la duplicación y división de un conjunto de números.

### Duplicación del número 7



### División del número 18



Let op: de met een ring gemerkte kogel moet boven links liggen.

**NL**

**SCHUBI abaco 20 -**

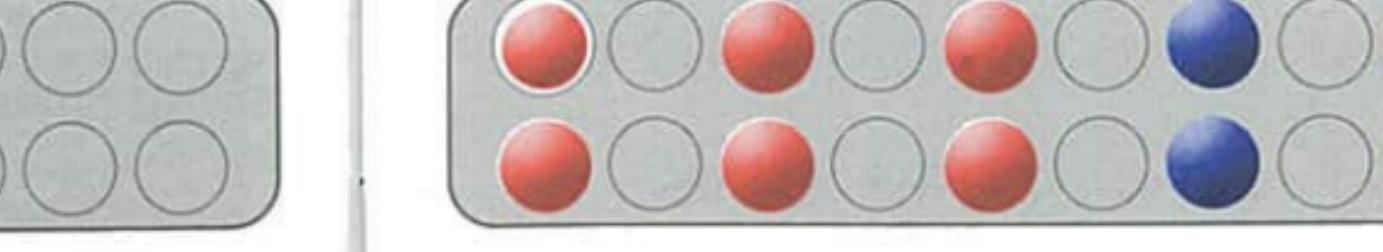
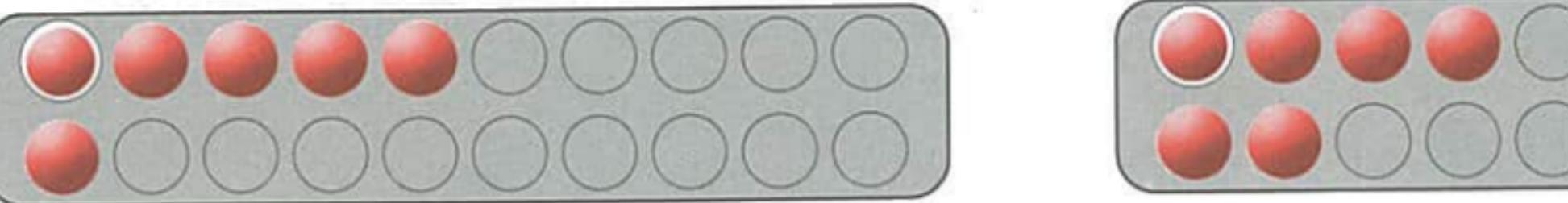
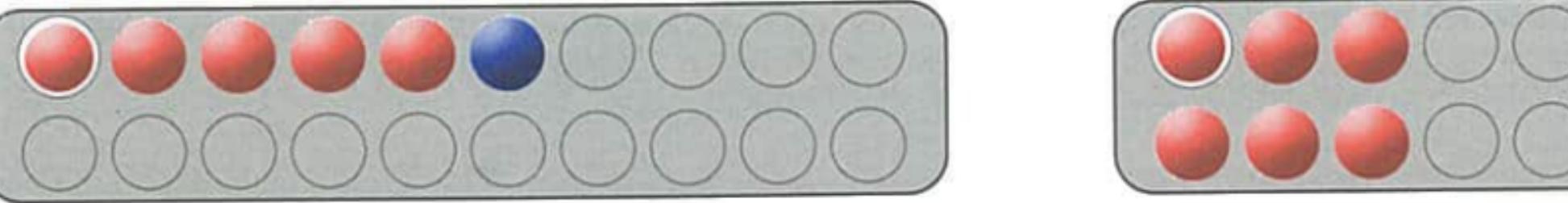
**het telraam met de geniale truc**

**C**

224 60 C

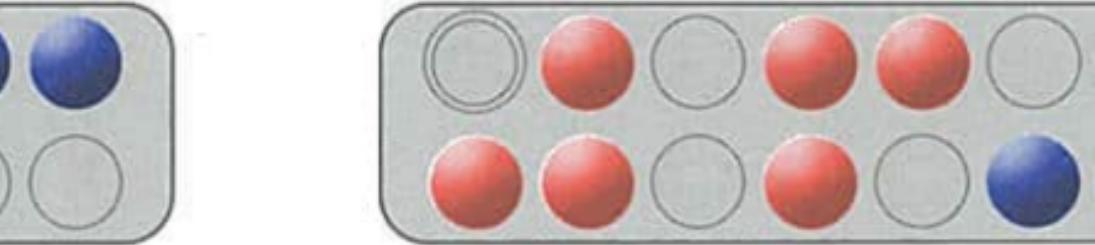
De **getalshoeveelheden tot 20** kunnen op elke willekeurige plaats op de **SCHUBI abaco 20** samengesteld worden. Dit geeft de mogelijkheid verscheidene voorbeelden van gelijke aantallen te laten zien.

b.v. de hoeveelheid 6

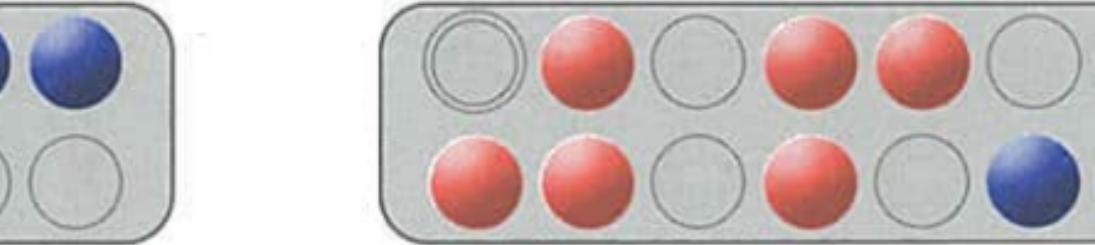


Met de **SCHUBI abaco 20** kun je getalsgroepen in verschillende **groeperingen** samenstellen. Hieronder b.v. van elk twee voorbeelden van een samenstelling van 2 en 3:

Samenstelling met 2

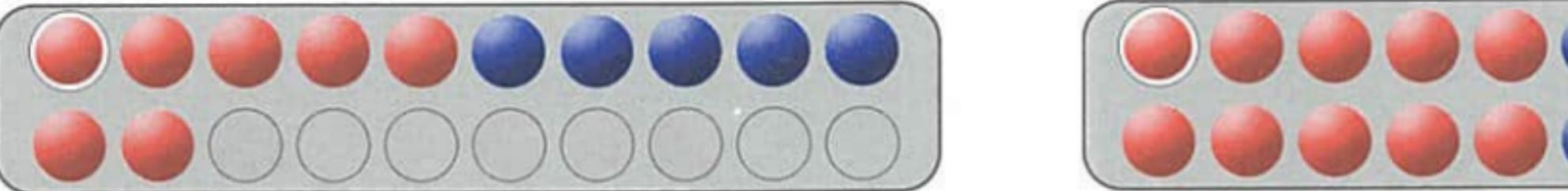


Samenstelling met 3

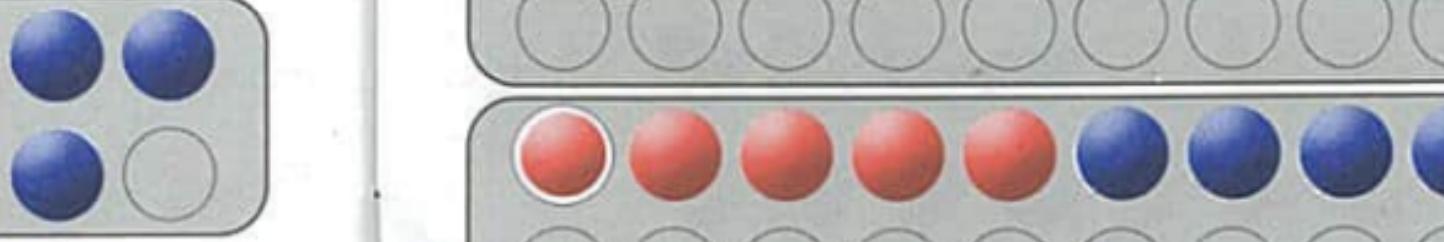


Het is bijzonder handig dat alleen die **kogelhelften geactiveerd** worden die ook werkelijk voor de opgave nodig zijn. Alle andere kogelhelften blijven dan in de neutrale (grijze) stand.

$12 + 6 = \square$



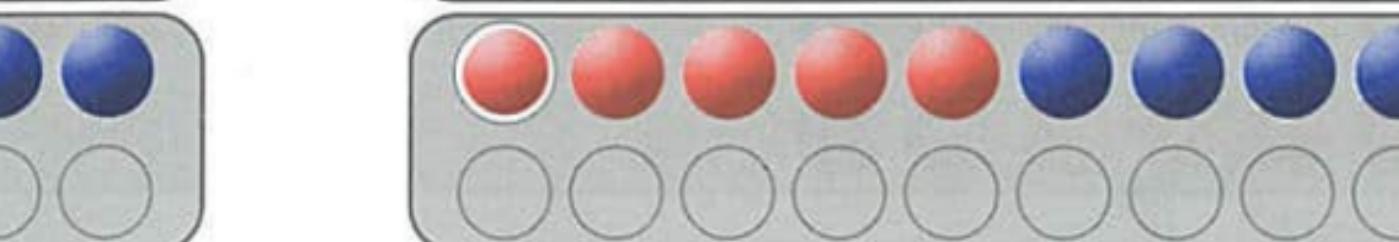
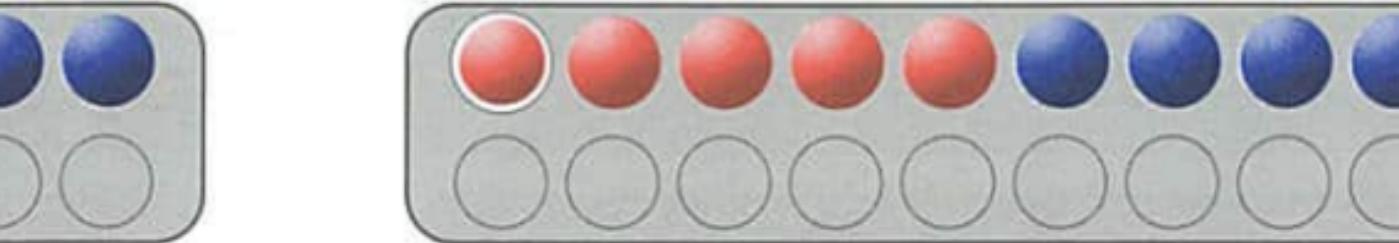
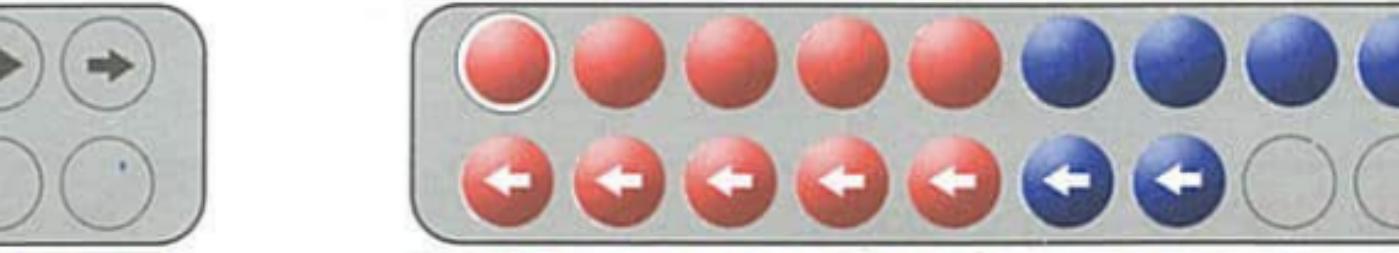
$19 - 8 = \square$



### Overschrijding van het getal 10:

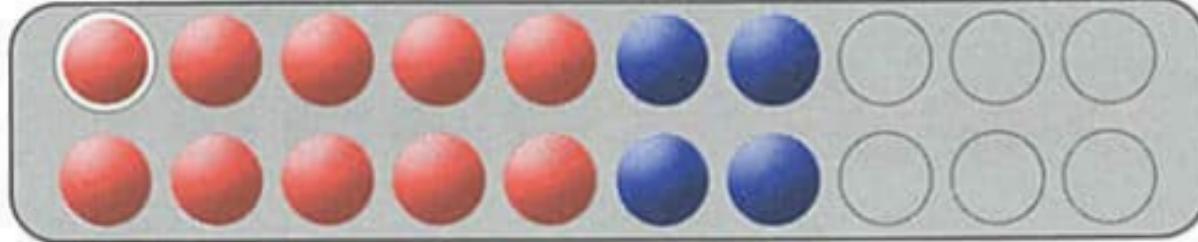
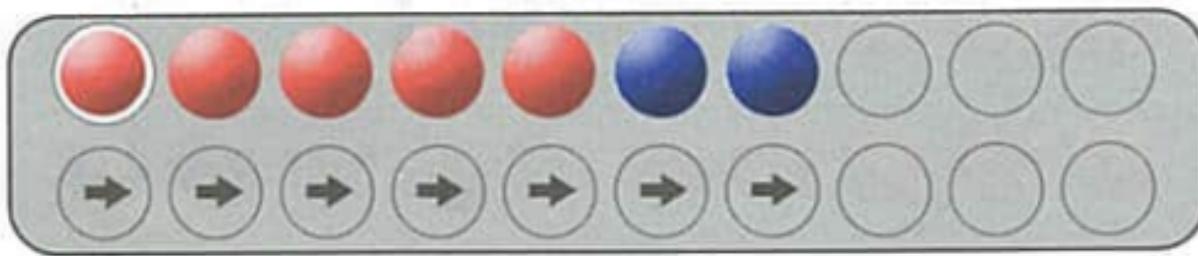
$8 + 6 = \square$

$17 - 8 = \square$



Bij het **verdubbelen** en bij het **halveren** van getalshoeveelheden is het parallel gebruik van beide tientallen van de **SCHUBI abaco 20** te benutten.

### Verdubbelen van de hoeveelheid 7



### Halveren van de hoeveelheid 18

