

Name and surname: \_\_\_\_\_

Grade: \_\_\_\_\_ Date \_\_\_\_\_

# Learning to calculate with the abacus



session  
**1**

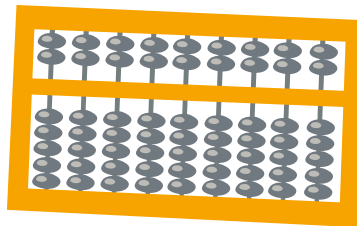
Length: 10 minutes  
Material: pencil

## activity 1:

**What is their name? Where do they come from?**

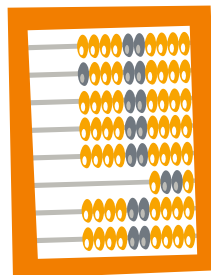
Link with arrows each abacus to their name and place of origin.

**SOROBAN** ●



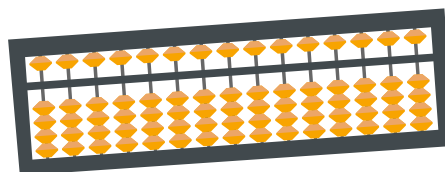
● **CHINA**

**SUAN-PAN** ●



● **JAPAN**

**SCHOTY** ●



● **RUSSIA**

Name and surname: \_\_\_\_\_

Grade: \_\_\_\_\_ Date \_\_\_\_\_

# Learning to calculate with the abacus



session  
**1**

Length: 15 minutes  
Material: scissors, sheet of paper

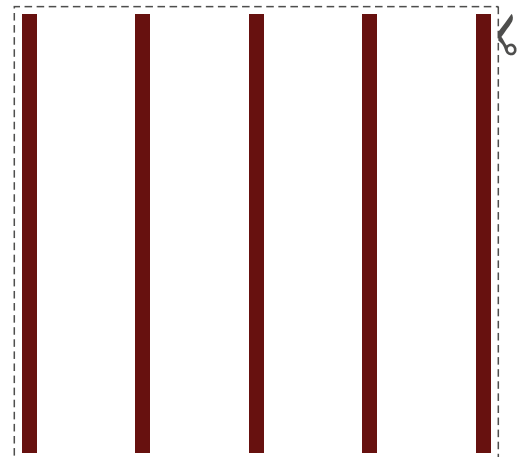
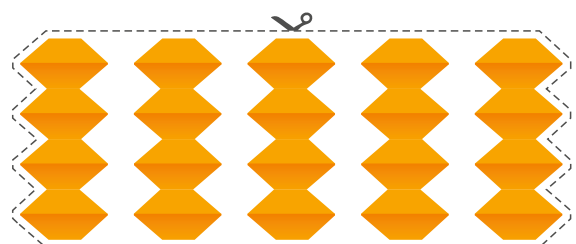
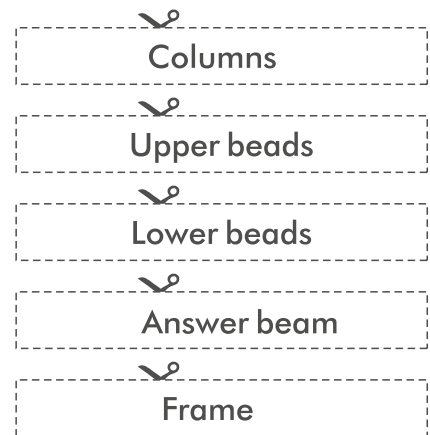
## activity 2:

### Build your abacus

#### Steps to follow:

- 1- Cut out each part of the abacus. Do the same with the words on the right side.
- 2- Build your abacus and stick it to a sheet of paper.
- 3- Stick each word to the corresponding part of the abacus.

Some words can be placed in various places, such as columns as there are many.



# Learning to calculate with the abacus

Length: 10 minutes

Material: pencil

Organization: individual

Content: concept of abacus  
and its history

## session 1



## activity 1:

### What is their name? Where do they come from?

#### Information for the teacher

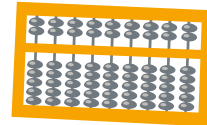
The abacus is a device to solve arithmetic operations. It is considered the most ancient calculation tool and it has been adapted by different cultures. It was already used in ancient Greece and Rome. It was later introduced in the European culture.

The use of the abacus to solve mental arithmetic operations benefits the brain as it boosts speed and accuracy, Attention and Concentration, Creativity, Visualization and Listening skills, Photographic Memory, Spatial Orientation, Analytical Abilities and Self-esteem.

Nowadays, mainly three types of abacus are used:

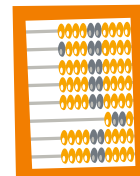
#### Suan-Pan: China

The chinese abacus or Suan-Pan consists of two upper beads and five lower beads.



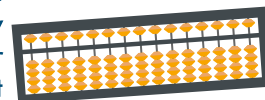
#### Schoty: Russia

The Russian abacus or Schoty consists of ten beads in almost every column. In some models two beads have a different colour to make calculations easier.



#### Soroban: Japan

The Japanese abacus or Soroban has its origin in the 16th century and it has varied in the number of beads it has. Currently, it consists of one upper bead and four lower beads. The Soroban abacus is the more developed model. It allows to do calculations quicker.



Now, solve the activity from the student's practice sheet.

# Learning to calculate with the abacus

Length: 10 minutes  
 Material: pencil  
 Organisation: individual  
 Content: concept of abacus and its history

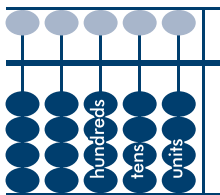
## session 1



## activity 2:

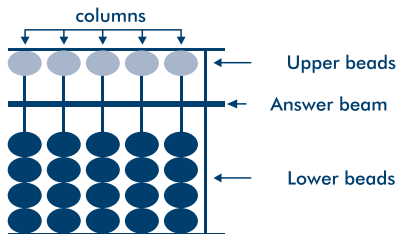
### Build your abacus

#### Information for the teacher

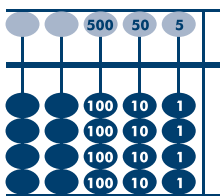


The abacus is divided into columns. Each column, starting from the right, is equal to a numerical position. Thus, the first column on the right corresponds to the units, the second to tens, the third to hundreds and so on.

*NOTE: The students will only work on the units so this information will be just for their reference.*



In each column, we will find four lower beads and one upper bead. The lower beads are separated from the upper one by the answer beam. The beads touching the beam are part of the result.



In each column, the lower beads equal one unit of its value. Thus, in the units column the bottom beads are worth one each but in the tens column the beads are worth ten each. The beads on the top row, work the same way but are worth five times more than the lower row. Thus, the upper bead in the first column (units) is worth 5, the second column (tens) is worth 50, the third column (hundreds) is worth 500, and so on.

To start calculating with the abacus, it should be in the initial position (number 00000000), with all the lower beads down and the upper bead up. That is to say, no bead shall touch the answer beam, which is the bar separating the upper bead from the lower ones.

*NOTE: Do only explain the units' column.*

Now, solve the activity from the student's practice sheet.



## Game 1

Length: 5 min

### Hands in-out

**Main ability practised:** Attention and concentration.

**This game also enhances:** Listening Capacity.

The students must have both hands off the table. If the teacher says "in" they should put the hand of their choice (right or left) on the table quickly. If the teacher says "out" they should take their hand off the table. The teacher will increase the speed gradually.

Developed by:



in collaboration with: [www.orientacionandujar.es](http://www.orientacionandujar.es)