



# MATHS in the GYM

# 1st CLASS

## Base 10/Decimal system (Enrica Polidoro)

### **GAME GOAL:**

Knowing the Decimal system

### **A brief introduction**

Base 10 is used in most modern civilizations and was the most common system for ancient civilizations, most likely because humans have 10 fingers.

Egyptian hieroglyphs dating back to 3000 BC show evidence of a decimal system. This system was handed to Greece, although the Greeks and Romans commonly used base 5 as well. Decimal fractions first came into use in China in the 1st century BC.

Some other civilizations used different number bases. For example, the Mayans used base 20, possibly from counting both fingers and toes. The Yuki language of California uses base 8 (octal), by counting the spaces between fingers rather than the digits.

It refers to the numbering system in common use that uses decimal numbers. Base 10 is also called the decimal system.

### **REQUIRED ITEMS:**

Some balls

### **CARRYING OUT ACTIVITIES**

Divide your students into two teams and place them on two rows facing each other. When you give the start, the first pupil of "Team A" does some dribbles (eg. 4.) The first pupil of Team B will have to respond with exact number of dribbles that forms number 10. The game continues with the rest of the children changing the starter team each time.

You assign a point to each correct answer.

## 2nd CLASS

### Division (Carla Treppiedi)

#### GAME GOAL:

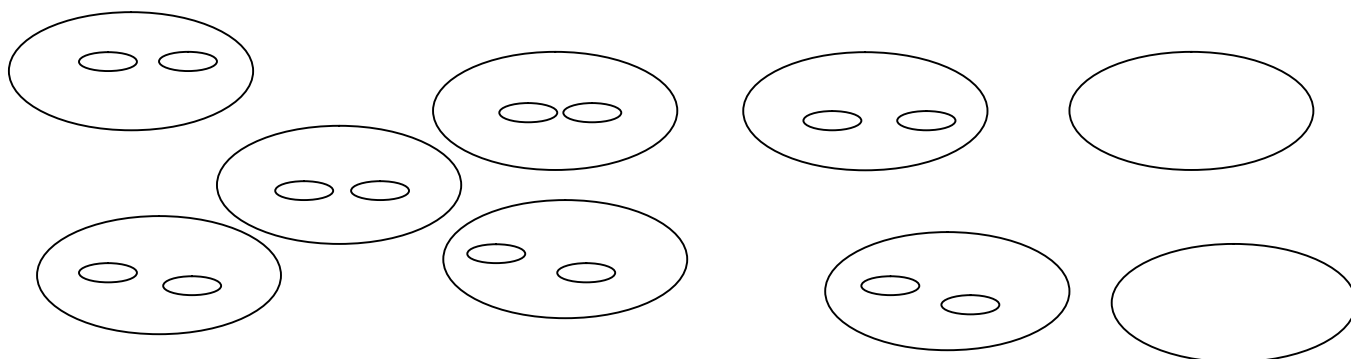
Learning the concept of division

#### REQUIRED ITEMS:

Circles

#### First case

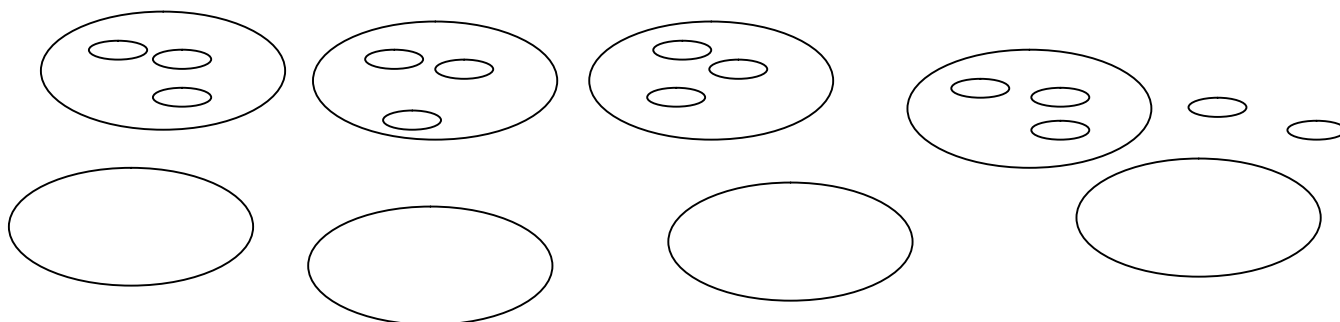
Teacher puts 10 circles on the floor. In this case we have 14 pupils, for example. Teacher calls a number: "2!". Pupils run into the circles but 2 in each circle.



In this case  $14 \div 2 = 7$ . But you can also try with  $14:7$  and you can have 7 people into a circle!!!!!!

#### Second case

You can say  $14 \div 3$ . In this case the result will be different.



We have  $7:3=4$  but 2 people more...this is the remainder.

You can use all the numbers and combinations you prefer!!!!

## 3<sup>rd</sup> CLASS

### Capture the flag (Daniele Aceto)

#### GAME GOAL:

This is a variant of the traditional outdoor game where two teams fight to catch an hanging flag, and bring it safely back to their own base.

#### REQUIRED ITEMS:

A small flag

#### CARRYING OUT ACTIVITIES

The field is divided into two clearly designated halves, known as territories. Players form two teams, one for each territory.

In both teams a progressive number is assigned to each player (the first player will be number 1, player next to him number 2, and so on). The teacher becomes the flag carrier and he stands at one end of the middle line. Holding the flag in his hand, with his arm stretched forward, he calls a number using a simple operations.

In the two teams the players that corresponding to the number solution must run to the flag carrier to steal the flag.

There are two options: either grab the flag before the other and run to the safe zone without being touched, or, if one grabs the flag first, the other must touch him before he arrives at his safe zone.

The player's team stealing the flag, scores a point.



## 4<sup>th</sup> CLASS

### Intelligent ropes (Federica Fiorentino)

**GAME GOAL:** Knowing and representing shapes

**REQUIRED ITEMS:**

One rope for each pupil

**CARRYING OUT ACTIVITIES**

The teacher forms groups of 3, 4 or 5 children.

Every children has a rope.

Children start running/skipping the rope in the gym.

At the teacher's signal they stop.

The teacher shows them a cardboard on which a geometric shape is represented.

The groups draw the geometric shape on the floor with the ropes.

Then they walk around or inside the geometric shape to point the perimeter and/or the area.



## 5<sup>th</sup> CLASS

### The four cardinal points (Antonella Di Giammarino)

#### GAME GOAL:

Catching the mate in front of me, without being captured by the one behind and run following a pre-established path

#### REQUIRED ITEMS:

- A fabric tape of (possibly) four colours.

#### CARRYING OUT ACTIVITIES

Each team place themselves in a single line, following the four cardinal points.

Each child has got a piece of fabric “tail” in its trousers (possibly of the same colour of his team).

Children are numbered from 1 to 4 (or 5, 6 if more).

The teacher calls a number (ie. number 2) and all number 2 leave, after the “go” whistle signal, towards the right, on the same path of the mates that are in front of them. They must catch the “tail” of the mate in front of them, making sure that their own tail is not captured. They are “safe” when they reach their starting place.

When the teacher decides, the place can be exchanged.

The team that collect more “tails” are the winner.

Other option: without the tails. The rules are the same but instead of catching the tail, it's necessary to touch the pupils ahead.

