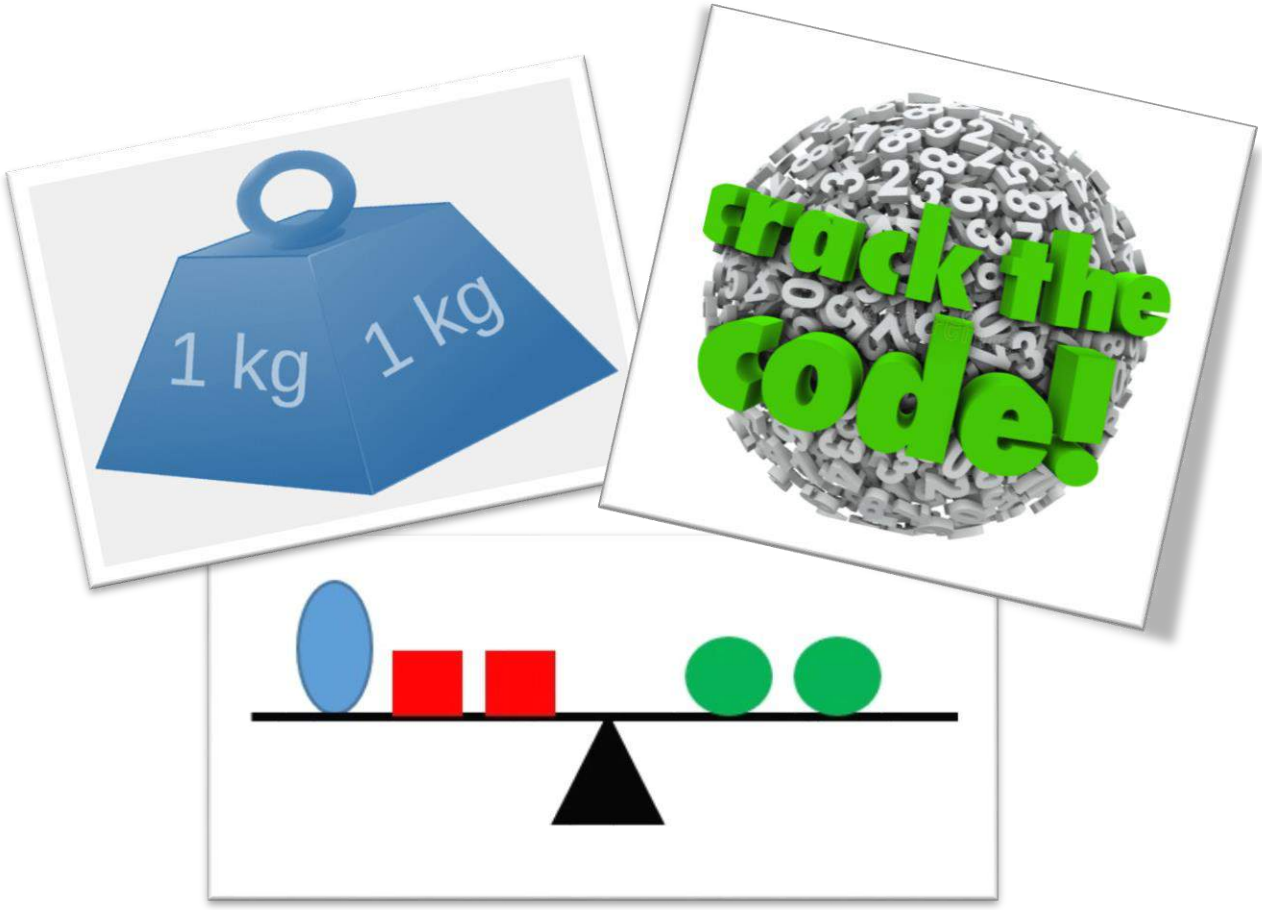
ftit KULJUM

matematika għal kulħadd

Tasks for Year 3 and Year 4



SCIENCE CENTRE
PEMBROKE MALTA

MINISTRY FOR EDUCATION AND EMPLOYMENT
DIRECTORATE FOR LEARNING AND ASSESSMENT PROGRAMMES

LEGO BRICKS CHALLENGE

How many Lego Bricks challenges can you complete?

1. Lego number formation

Grab a random number of bricks and build a **number** using all your bricks.

2. Lego colour pattern

Create a Lego **colour pattern**.

3. Lego tens and units

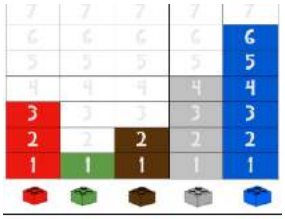
Represent a number ex: 15 into **tens and units** using Lego bricks.

4. Lego counting in 3s

Grab a random number of Lego bricks and **group them in 3s**. **How many** bricks were there?

5. Lego grab and graph

Grab a number of Lego bricks. Sort them by colour and then record the data in a bar graph.



6. Lego Symmetry

Create a symmetrical pattern with Lego bricks.

7. Lego Addition

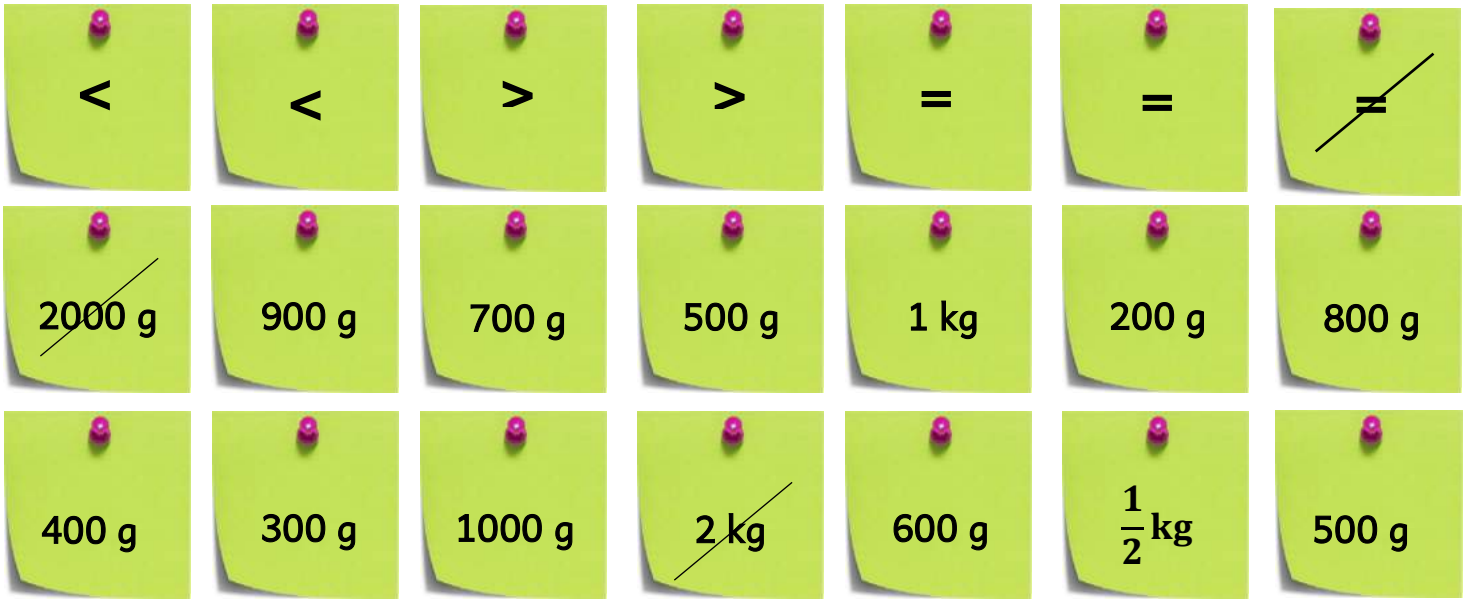
Take 6 red bricks, 3 blue bricks and 7 green bricks. Think of different ways how to add bricks.

8. Be creative with Lego

You are asked to show any other mathematics concept learnt so far using Lego bricks.

FACTS ABOUT MASS

Use numbers and signs to make six **true** number statements.
Use two numbers and a sign in each true statement.

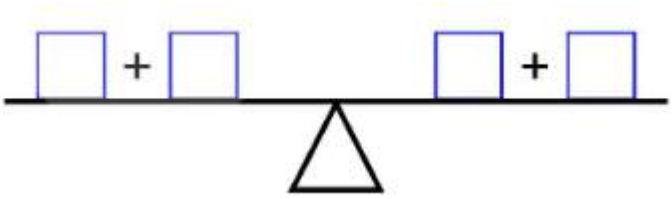


Hint: Copy each mass and sign on to a piece of paper, then move them around to make true statements about mass. Be careful not to rotate the signs. Do not write any statements in the boxes below before all six statements are formed correctly.

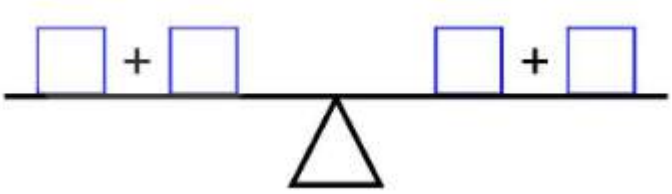
FACTS ABOUT MASS	
Example: 2 kg = 2000 g	

THE EQUATION BALANCE

Use the numbers in the box to balance each scale.

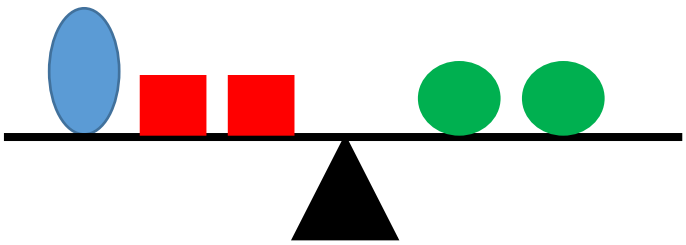


5	8	4	9



3	6	8	5

THE SHAPE BALANCE



The **total mass** on the balance is **36 g**.
All shapes weigh **less than 10 g**.

● - ■ > 3

Work out the mass of **each shape**.

● = ■ = ⬮ =

THE MYSTERY BUILD

You are asked to build a model out of recycled material. Each material or usage of particular equipment comes at a cost. The budget for the completion of the task is €1. Fill in the costings sheet below before you start your project, to make sure that the budget is not exceeded.

Item	Cost	Quantity	Total
matchsticks	1c each		
toilet paper rolls	5c each		
plastic cups	2c each		
cardboard paper	15c each		
tape	3c for every 20 cm		
pegs	4c per peg		
cereal / pasta box	5c per face		
use of glue	8c		
use of ruler	5c		
use of scissors	10c		
an object of your own choice	7c if mass is less than a kg 9c if mass is more than a kg		
		TOTAL COST = €	

Money saved | €

IN THE KITCHEN

Discuss these statements with your family members or friends and decide if they are:

always or sometimes or never TRUE?

The oven door has just 1 right angle.	1 litre of water weighs the same as 1 litre of washing up liquid soap.
All preservatives come in a 3d shape container in the form of a cylinder.	1 kg of apples is cheaper than 1 kg of oranges.
Two 500 ml cartons of milk are equal to 1 litre carton of milk.	The maximum number of people sitting around the kitchen table is always an even number.
50 olives is the same as 5 groups of ten olives.	According to the recipe, muffins take 30 minutes to bake at a temperature of 180°. Mum decides to bake muffins at 360° so muffins will take 60 minutes to bake.

CORRECT or NOT CORRECT?

I start cooking at 4 o'clock. I finish 1 hour later. I finish at 6 o'clock.
2 packets of biscuits cost €2. This is the same as 3 packets for €3.
A cake takes 1 hour to bake. This is equal to 65 minutes.

LET'S CRACK THE CODE

You are safe at home and it is your birthday. You hear the doorbell ringing. It is a delivery man and he has a special package for you. Taking all necessary precautions you collect the package and open it up. It is a chest sent to you by your uncle who lives abroad as a birthday present. But this chest is locked! It is locked with a padlock. On top of the chest you find an envelope with a note from your uncle in it. He informs you that in order to open the padlock you need to solve the 5 Maths challenges found in the envelope.

Are you ready for this challenge?

CHALLENGE 1

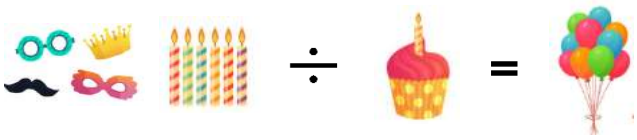
Look carefully at the two information tables below.

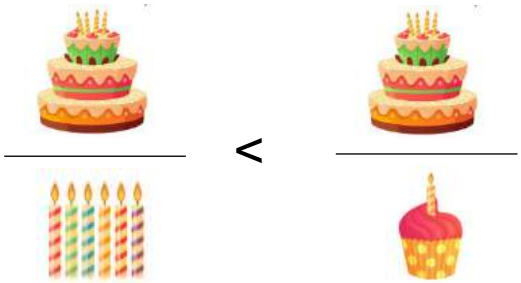
				
5	7	2	8	9

			
1	4	6	3

Change each picture to its corresponding digit

Are these calculations **Correct** (✓) or **Incorrect** (×) ?





Count the number of INCORRECT calculations.

This is your first digit to open the padlock.

CHALLENGE 2

Use the code breaker to reveal a mystery number in words.

A	B	C	D	E	F	G	H	I	J	K	L	M
3	78	95	8	60	55	1	10	5	25	29	18	4

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
24	19	100	11	200	14	50	9	0	12	6	21	1700

	Answer	Letter
50c + 50c	€	
half a metre in centimetres	cm	
minutes in 1 hour	minutes	
20c coins in €1	coins	
1 centimetre in millimetres	mm	

Rearrange the letters to form this number.

This number is your second digit to open the padlock.

CHALLENGE 3

Which are the numbers that are covered by the cakes?

4		12	16	20	24	28	32

48	44	40	36		28	24	20

80	72		56	48	40	32	24

16	20	24	28		36	40	44

8	16	24		40	48	56	64

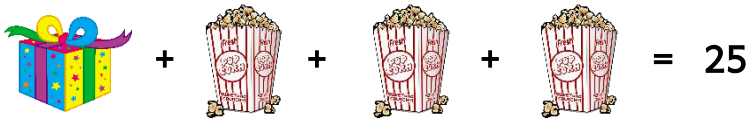
Now you have uncovered all numbers.
Which is the most popular number?
What is the **digit sum** of this number?

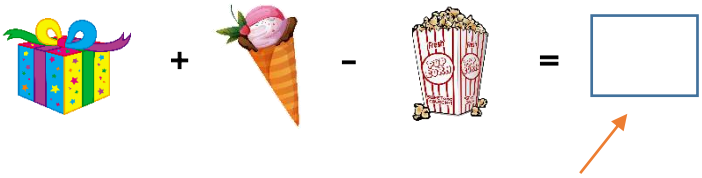
(Hint: To find the digit sum you need to add the digits which make up the number.
For example, the digit sum of 16 is [1 + 6 = 7]. So, 7 is the digit sum of the number 16.)

This is the third digit you need to unlock the padlock.

CHALLENGE 4

Let's find the 4th digit to open the padlock.





The answer is your fourth digit to open the padlock.

CHALLENGE 5

These birthday cards will provide you with your last digit.

Work out the total cost of all the cards.

Double €1

Half €5

3 coins of 50c

100c

€5 - €2

25c + 20c + 5c + 2c

The last digit you need to complete the CODE is the last digit found in the total cost of all the cards.

THE **SECRET CODE** IS | | | | | |.

Answers for all tasks in this booklet are available on https://primarymaths.skola.edu.mt/ftit-kuljum/ .