



Rallye Mathématiques 2014/2015 du Cantal
First round
CM1/CM2/6èmes. Décembre 2014

Problème n°1: Fruit Candy

12 Points

There are three kinds of cuberdons (Belgian candy) in the packet of Guy: orange, violet and raspberry

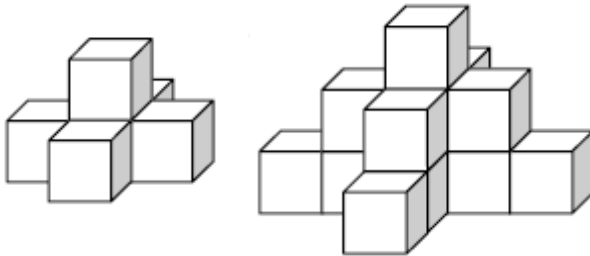
- There is an odd number of candies in the packet.
- Candy raspberry are the most numerous.
- The number of sweets Orange is the same as that of violet sweets.
- The multiplication of the three numbers is 36.

How many candies of each kind are there in the packet of Guy?



Problème n°2: Building kit

14 points



Here are two stacks, one with 2 floors (and 6 cubes) and one with 3 floors (and 15 cubes).

How many cubes (in total) would it take to build a big stack of 10 floors continuing on the same model? On the answer sheet, record the final calculation and its result.

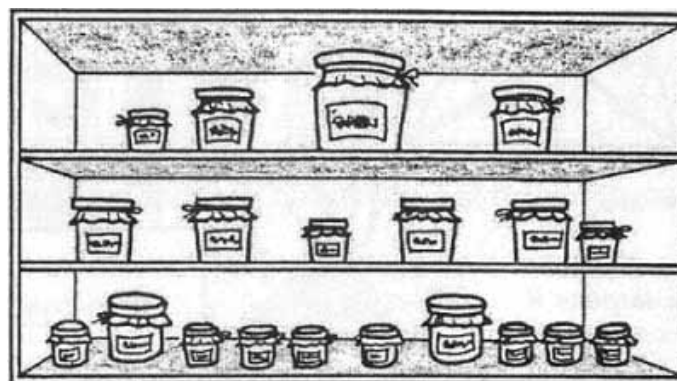
Problème n°3: Lakka jam (Arctic Raspberry frequent in Finland)

15 points

Tarmo prepared lakka jam with his son Arvo.

They fill 20 pots of 3 different sizes. 20 pots filled weigh all 8400 grams.

Tarmo places them on three shelves, as shown in the drawing below, so that each shelf support the same weight:



Find the weight of a small pot, a medium pot and a large pot.

Problème n°4: Weird!

17 points

Children from the school of Camprodon expect to take two buses that will take them skiing.

- How much are they? request the organizer.
- Less than a hundred, answered one of the drivers!
- Put yourself in rank 2 by 2 that I intend to you! said organizer to children.



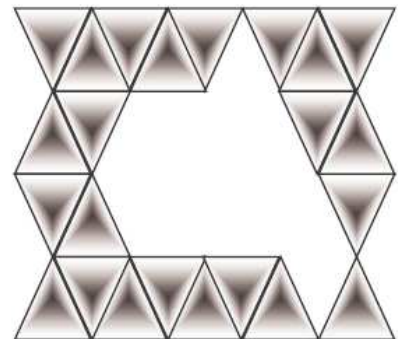
By putting them 2 and 2, he finds that there is a child who is alone.
He then asked them to put 3 by 3: there is always a child alone
He immediately asks them to put 4 by 4: there is still a child alone
Weird ...! He still finds the same thing when children put 5 on 5 and 6 by 6 ... he is still a child alone!

How many children are they?

Problème n°5 : Stopgap

10 Points

How many triangles as this one will it take to plug the hole?



Problème n°6 : The travellers

20 points

Four women, Babette, Helina, Carme and Maureen are sitting at the table. They talk about their travels. One went in Catalonia, one in Belgium, one in Finland and one in France. Each used a different means of transport: bus, boat, plane, car.

- 1- The woman who traveled by bus does not like sweets.
- 2- Carme says she loved Helsinki.
- 3- The woman who came by boat offered a sweet to Maureen.
- 4- Babette said: "In fact Carme, when you called me from the airport on the day of your departure, I was visiting the Salvador Dali Museum in Figueres."
- 5- The woman who traveled by boat was wearing (when she came back home) a silk scarf she bought in Brussels.
- 6- Helina has always a pack of licorice candy on her when she travels

Find the destination and means of transportation of each woman. Help yourself of tables:

	Catalonia	Belgium	Finland	France
Babette				
Helina				
Carme				
Maureen				

	Car	Boat	Bus	Plane
Babette				
Helina				
Carme				
Maureen				