Maths with Super M 1

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Supermatisaurus is a special dinosaur and he lives with Family White.

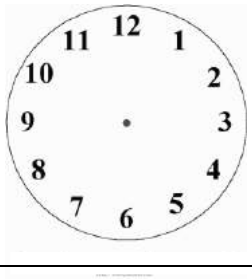
He is special because he does everything any human being can do! He can even speak!

Super M, as all the members of the family and his friends call him, loves Maths!

1. Supermatisaurus, unlike the rest of the family, wakes up very early on Sunday mornings.

   He wakes up at **quarter past six**.

   Show this time on the clock.



2. To start his day Super M enjoys a bowl of cereal and milk.

   That is what he did last Sunday morning.

   There was a **full 1 litre** carton of milk in the fridge.

   He poured **0•23 litres** in the bowl, so **how much milk was left** in the carton?

_____ litres

3. As he was preparing the cereal he glanced at the calendar.

   "**Today's is Monday, 6th January. 70 days more it will be a Monday as well**," he thought.

   a) Is Super M **right**? Yes ☐ No ☐ *(Put a tick [✓] next to the correct answer)*

   b)

What day of the week will a **100 days more** from today be?

_____

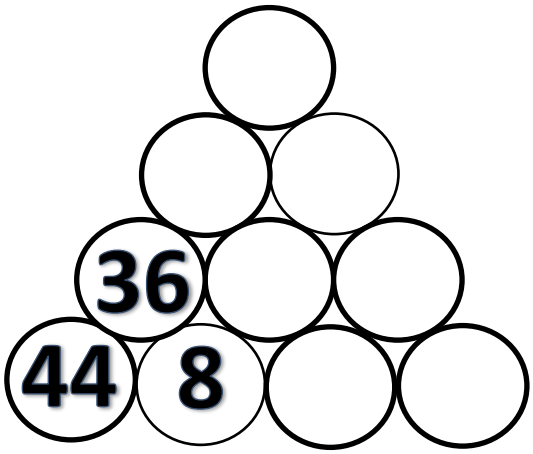
4. Sitting quietly in the kitchen he enjoys solving maths challenges.

Below is the challenge he was trying to solve last Sunday.

Can you try to help him out!

6	15	21	21	42	50	71

Clue: Use all the numbers in the cards once.



5. Besides Super M, Family White consists of four more members: dad, mum, Martha and Max.

The last one to wake up on Sundays is usually Max, the youngest member of the family.

Max woke up at **quarter to nine** last Sunday and Martha woke up **25 minutes before**.

At what time did Martha wake up?

_____:_____

6. Super M is also a keen football player.

His team, the DINOS, is participating in a 5-a-side football tournament.

The first match was last Sunday at noon. All the Whites went to support the DINOS.

There are **6 football teams** in all in the tournament. **Each team has to play every other team.**

a) **How many games in all will Super M play?**

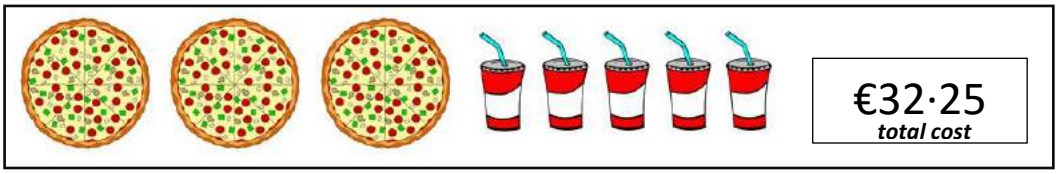
_____ games

b) **How many games in all will be played in the tournament?**

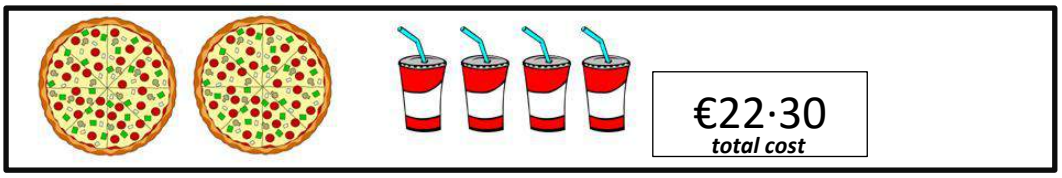
_____ games

7. After the match, Super M and the Whites ate at their favourite PIZZA place.

They had:



Two Sundays before they had:



At the PIZZA place:

a) one  and one  cost € ___.___ .

b) one  costs € ___.___ .

c) one  costs € ___.___ .

8. Driving back home, being stuck in traffic, Maria, Max and Super M decided to play some games with the numbers on the different NUMBER PLATES of the cars in front of them.

Below is one of the number plates:

Use all the digits on the number plate once in every question.

Write:

a) the **largest number** _____

b) the **largest even number** _____

c) a number which is **1537 less than 7000** _____

d) the **largest multiplication sum (with largest product)** _____

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9. At **eight o'clock**, while Dad was watching the news, Mum helped Maria, Max and Super M get ready for bed.

The news was **35 minutes long** and **15 minutes after the news was over** Maria, Max and Super M were in bed.

Write the time the children were in bed in **24-hour clock notation**.

_____:_____

10. In bed Super M had a go at his favourite bedtime challenge... the SUDOKU challenge.

Can you lend a hand?

				2	8		7	
			3					8
		8			1			4
	4					7		6
	8		7	5	6		4	
5		7					1	
9			8			6		
8					9			
	2		5	4				

Let's Investigate! The cereal box

Breakfast is the most important meal of the day.

A variety of breakfast cereals are enjoyed every day by children all over the countries however not every breakfast bowl is as healthy as it seems.

Today with plenty of time to take our breakfast we might also have time to investigate our cereal box.

1.	How many types of cereals does your family buy?	
2.	What is its/their cost? Name of Cereal Mass (Weight) Price	
3.	Which is the cheapest? Hint: Consider mass of package when comparing prices.	
4.	Round each price to the nearest euro	

Choose your favourite cereal and investigate.

5. The '**Ingredient List**' tells you each ingredient in the food product by its name.

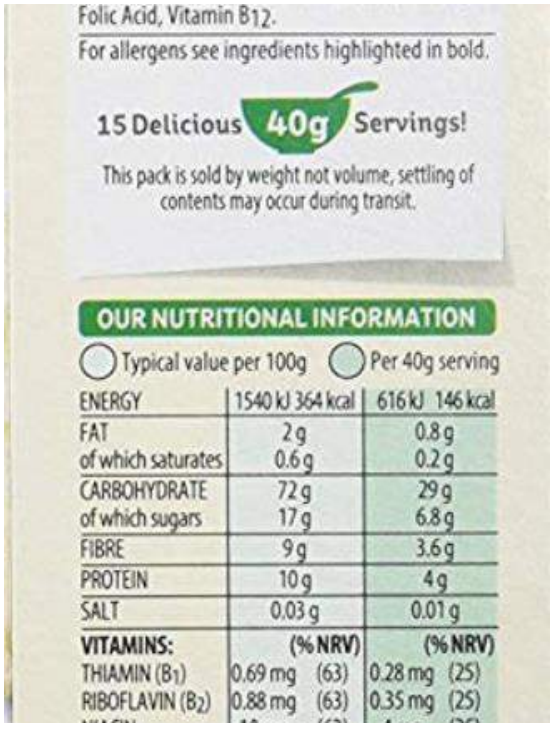
They are listed in descending order with the ingredients used in the greatest amount first.

List the two main ingredients in your cereal.

a) _____

b) _____

6a. How much is one **suggested serving**?
(find this information on the packaging)
Hint: Do not forget the unit of quantity e.g. kg/g


Folic Acid, Vitamin B12.
For allergens see ingredients highlighted in bold.
15 Delicious 40g Servings!
This pack is sold by weight not volume, settling of contents may occur during transit.
OUR NUTRITIONAL INFORMATION
Typical value per 100g Per 40g serving

ENERGY	1540 kJ 364 kcal	616 kJ 146 kcal
FAT	2 g	0.8 g
of which saturates	0.6 g	0.2 g
CARBOHYDRATE	72 g	29 g
of which sugars	17 g	6.8 g
FIBRE	9 g	3.6 g
PROTEIN	10 g	4 g
SALT	0.03 g	0.01 g
VITAMINS:	(% NRV)	(% NRV)
THIAMIN (B_1)	0.69 mg (63)	0.28 mg (25)
RIBOFLAVIN (B_2)	0.88 mg (63)	0.35 mg (25)

b. Weigh your serving.
Weigh the suggested serving.
Do you usually take less or more than the suggested serving?

c. Describe (in writing or drawing) your actual serving in fraction or decimal.

e.g. Suggested serving is 40g.
My actual serving is 20g.
Therefore, I take ½ the suggested serving.

d. From the Nutritional Information on the packaging, calculate these amounts in your actual serving.

i) fats

ii) sugars

iii) fibres

Important Information

- The recommended daily intake of **fat** for children aged 7 to 10, is approximately between 67.7grams (g) to 76.6 grams (g).
- Children aged 7 to 10 should have no more than 24 grams (g) of **sugars** a day.
- A 10-year old should get 15–20 grams (g) of **fibre** a day.

How does your cereal compare with this information?

7a. How many servings does the pack you buy contain?

Find info on packaging.

b. i) Keep a note of who eats cereal at home.

According to the suggested serving information, how many days should the cereal last?

ii) In reality, does it last less or more and why?

€2.10/kg

€2.48/kg

8a. Many people also eat fruit for breakfast.

How much will you spend in a month if you eat a banana every day?

b. How much will you spend in a month if you eat an apple every day?

Planning a Time-table

Write the timetable for a hockey tournament.

The first match starts at 14:00 (2:00 p.m.).

Timetable can be worked out using either the 24-hr clock or the 12-hr clock.

Each game is 25 minutes long.

Allow 10 minutes between each game.

Write the start and finish times for 10 games

Game	Start	Finish
1	14:00 (2:00 p.m.)	
2		

Extension:

Organizers want the tournament to finish at exactly 19.30 (7:30 p.m.).

The game itself cannot be shortened.

How can this be possible?

What adjustments must be made so that the tournament finishes at exactly 19:30 (7:30 p.m.)?

Modify and write the new time-table.

Game	Start	Finish

Expanding Pattern

The diagram shows the first three figures in a pattern.

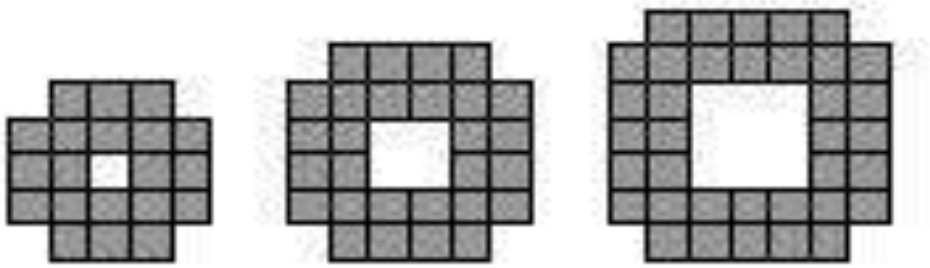


Figure 1 Figure 2 Figure 3

a) Figure 1 has 20 small (grey) squares.
Count and record the squares (grey) in Figure 2 and Figure 3.
What is happening?
How is the pattern growing?

b) Draw Figure 4.

c) If you continue this pattern, how many small (grey) squares are there in Figure 10?

Give your answer with an explanation.

c) Extension (Challenge).

How many small (grey) squares will there be in Figure 98?

Work it out and explain.

d) Create.

Create another diagram showing a growing pattern.

Draw the first 3 and the 19th one.

Label and explain.