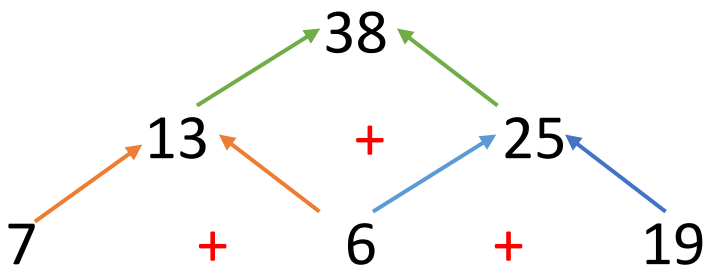
Heaper 6

Here are **six numbers** in a **triangle form**.

They are arranged so that each number above the bottom row is the sum of the two numbers upon which it sits.



Our challenge

See if you can place similarly each set of six numbers below:

2, 5, 7, 12, 14, 21

3, 7, 10, 11, 14, 24

5, 10, 15, 16, 21, 36

3, 5, 10, 13, 15, 28

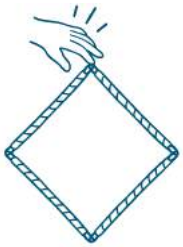
3, 6, 9, 14, 20, 29

2, 6, 8, 17, 23, 31

One last set:

19, 26, 32, 51, 58, 109

Matchstick shapes



Take 25 matchsticks.

Make as many triangles and squares (separate from each other) with the matchsticks.

Find 2 different combinations of triangles and squares.

2D shape Puzzles

Make a row of three 2D shapes.

- The first and the second shapes have a total of 5 sides.
- The second and third shapes have a total of 7 sides.
- The first and the last shape have a total of 4 sides.

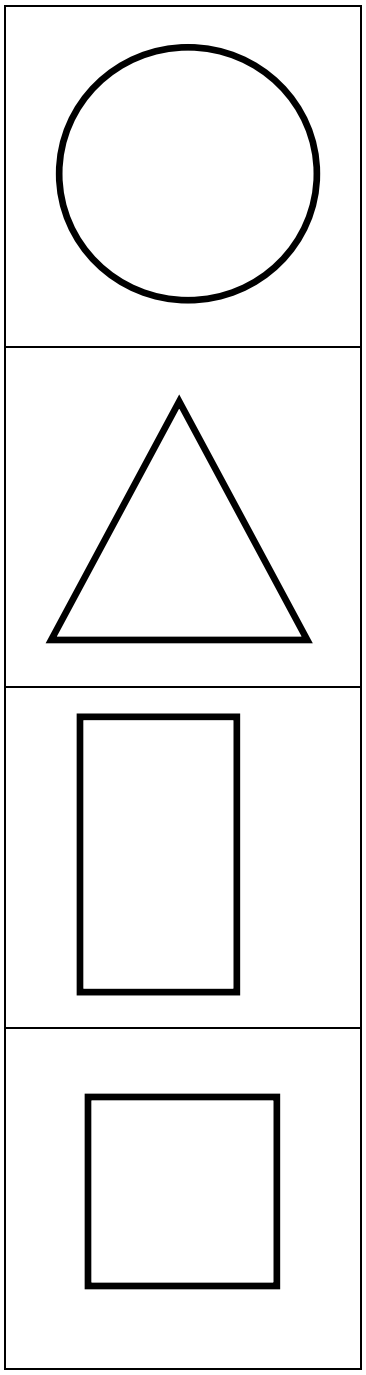
Draw or stick the corresponding 2D Shapes in the correct order.

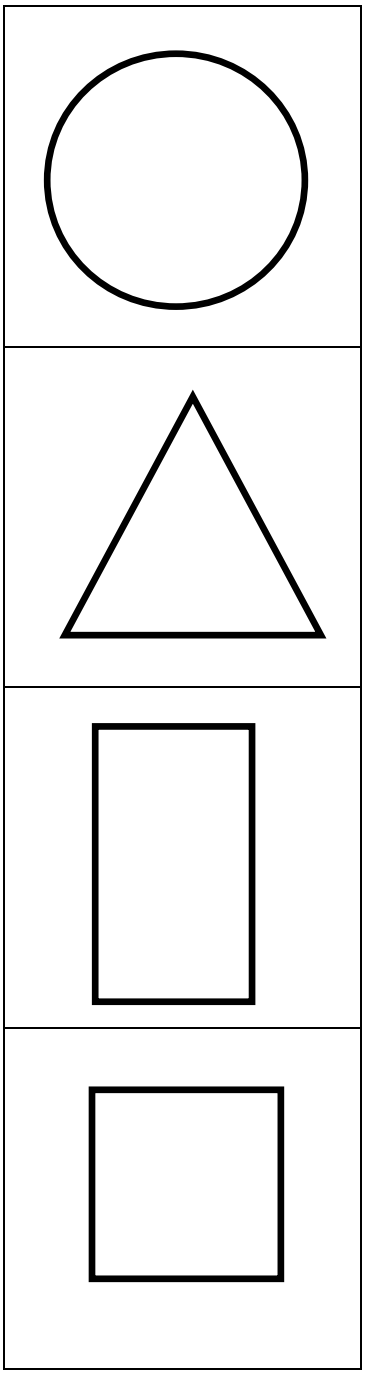
Make a row of four 2D shapes.

- The first and the second shapes have a total of 7 sides.
- The second and third shapes have a total of 8 sides.
- The third and fourth shapes have a total of 5 sides.
- The first and the last shape have a total of 4 sides.
- The rectangle is **between** the square and the circle.

Draw or stick the four 2D shapes in the correct order to match the clues

Cut and Paste to solve the '2D Shape Puzzles'

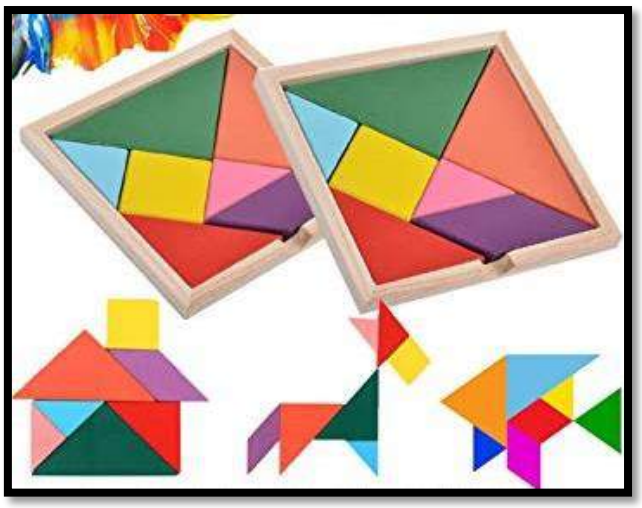




Tangram Challenge

What is a Tangram?

A puzzle made up of 7 shapes which can be arranged to form another shape.

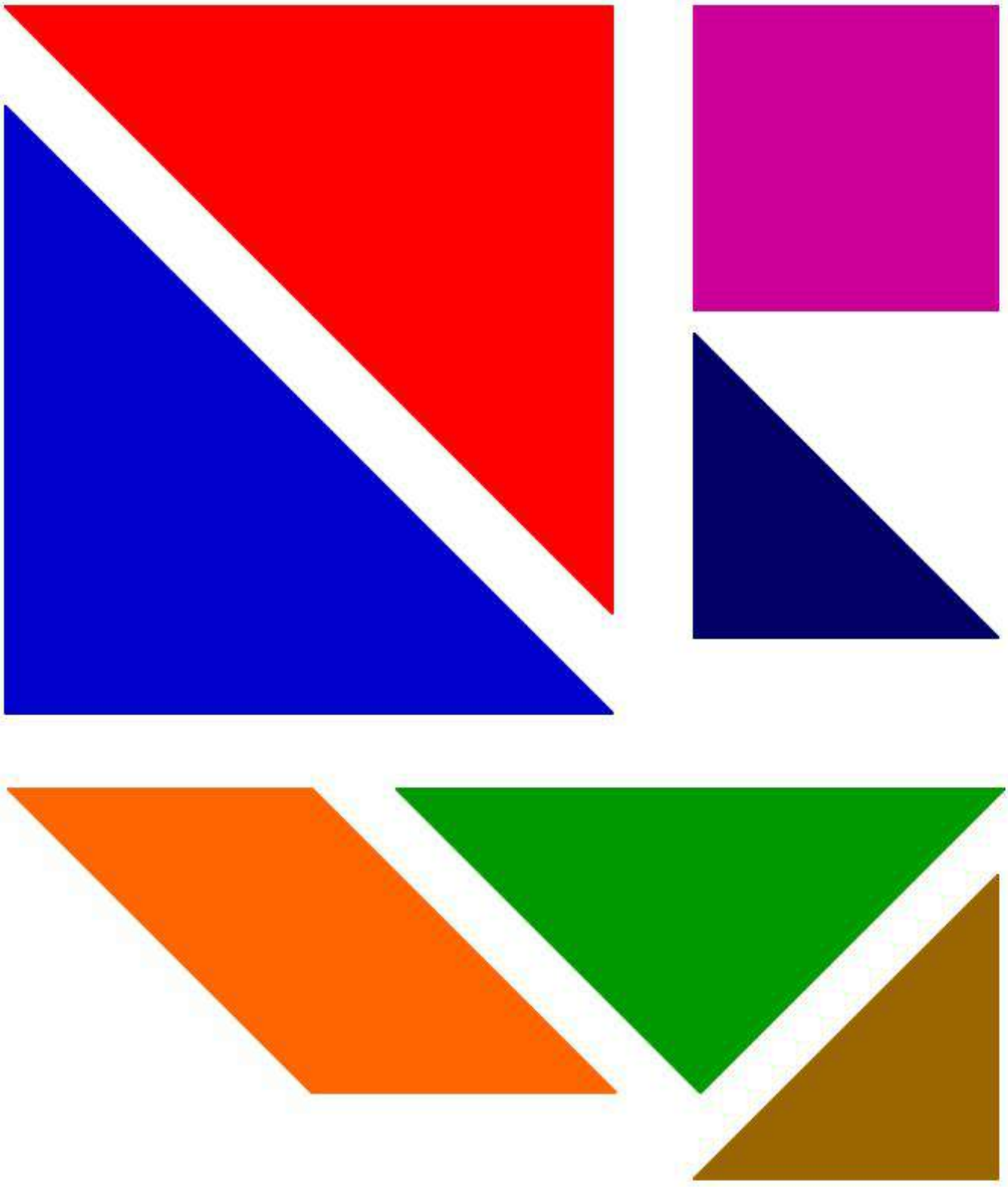


Tangram Challenges:

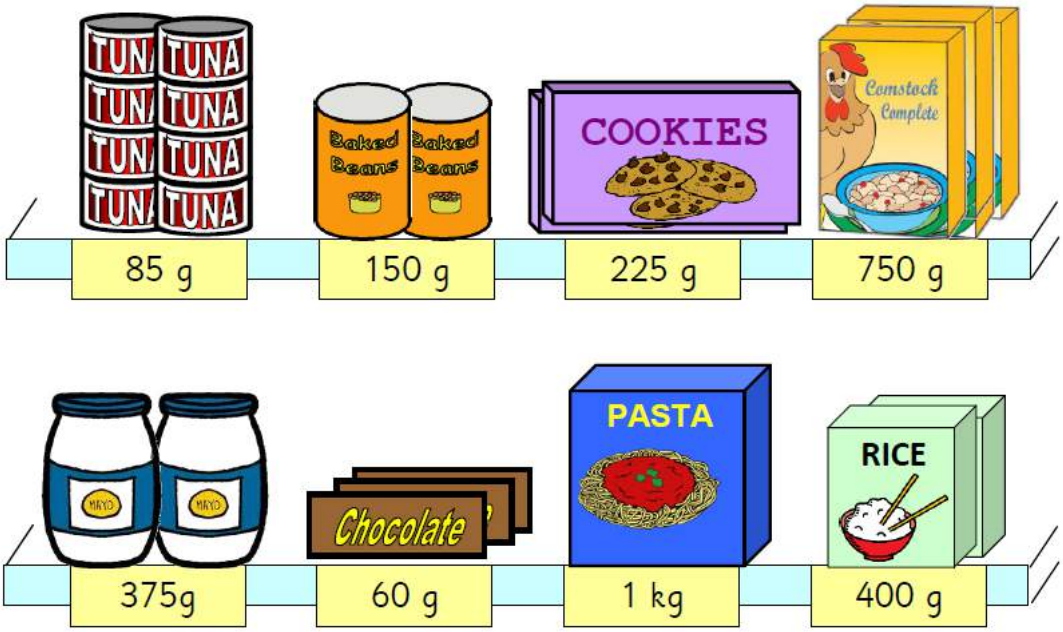
1. Use 2 tangram pieces to create a Square.
2. Use 3 tangram pieces to create a Square.
3. Use 4 tangram pieces to create a Square.
4. Use 3 tangram pieces to create a Triangle.
5. Be creative and create your own design using tangram pieces.

Tangrams

Instructions: Print and cut-out these tans. For best results, use heavy paper stock and a color printer



At the Supermarket



Labels show the mass (weight) of each item

Which is the **lightest item**? _____

Which is the **heaviest item**? _____

What is the **mass** of *a* **box of pasta in grams**? _____

Maria buys **1 cereal box** and **1 box of pasta**. What is the **mass** of the 2 items **altogether**?

John buys **2 chocolates** and **2 packets of rice**. What is the **total mass** of the 4 items?

Which **3 items** have a mass of **exactly 1kg altogether**?

Which **3 items**, **together** have the **same mass** as a **box of cereal**?

When going shopping, Lara always takes the shopping bag with her.

When **empty** the shopping bag has a **mass of 120g**.

From the supermarket, she buys **a packet of pasta**, **a can of baked beans** and **a packet of rice**.

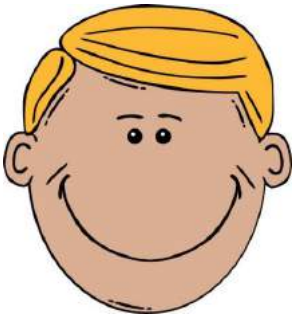
What is the **total mass** that she needs to carry back home?

Luke prefers to carry his groceries in an empty cardboard box.

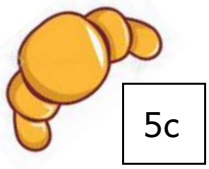
He buys **2 cans of tuna**, **1 chocolate**, a **packet of rice** and a **can of baked beans**.

The **total mass** of the box **is 1kg**.

What is the **mass** of the **box when empty**?



Treat bags


5c


30c

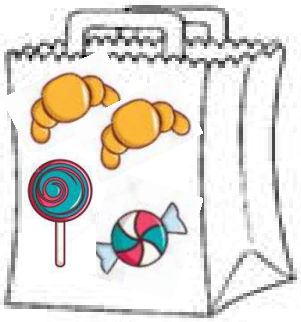

2c


15c


10c


8c

Dan's bag costs **22c**. Which one is his bag? **Circle** the **correct bag**.

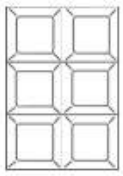


How many different treat bags can you make? The **total cost** of each bag is to be **exactly 30c**. You **cannot** put **more than 2** treats of the same type, in each bag. **Record** the **quantities** of different treats in the table below:

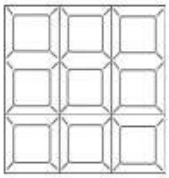
Treat bags						
Bag 1						
Bag 2						
Bag 3						

Max really likes chocolate. Dark chocolate squares are his favourite.

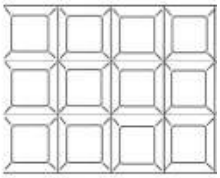
Max makes a growing pattern with chocolate squares.



6 squares



9 squares



12 squares

If the pattern continues, **how many squares** would Max use to make **patterns 4 and 5**? **Fill in** the table below:

Pattern	1	2	3	4	5
No. of squares	6	9	12		

Danika has a box of assorted chocolates. There are **24 chocolates in all**.

$\frac{1}{4}$ **hazelnut** $\frac{1}{12}$ **chocolate orange** $\frac{1}{6}$ **white chocolate** $\frac{1}{2}$ **caramel**

Colour the squares in the grid below to represent the number of each type of chocolate.

hazelnut – **green**, chocolate orange – **orange**,

caramel – **yellow**, white chocolate – **white**

The chocolate gift box

A chocolate factory decides to design some gift boxes for a new kind of chocolate.

There shall be **36 chocolates in each box**.

1. Chocolates are placed in a **single layer** in the shape of a **square or rectangle**.

   How many different sized boxes can you design?

2. Now try making boxes of **36 chocolates in 2 layers**.

3. **Is it possible** to have 36 chocolates arranged in a square or rectangular shape in **3 layers**? If **yes, how**? If **no, why not**?

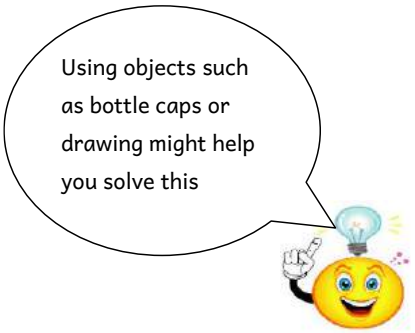


Photo Scavenger Hunt

Walk around your home and find objects which match the given statements in the list below. Take photos of the objects (you can use your tablet or a mobile phone) and kindly send them on the following email address: melanie.casha.sammut@ilearn.edu.mt

1. Something taller or longer than 1 m
2. A kitchen utensil / equipment used to measure capacity
3. An object that has the shape of a cylinder
4. A food product which expires in 2 years' time
5. A kitchen utensil / equipment used to measure mass
6. A container that can hold more than 1 litre

7. Something which you can count in twos

8. Something symmetrical

9. A pattern in the home environment

10. A container which is $\frac{3}{4}$ full.

11. A number of objects that is equal to 27 divided by 3.

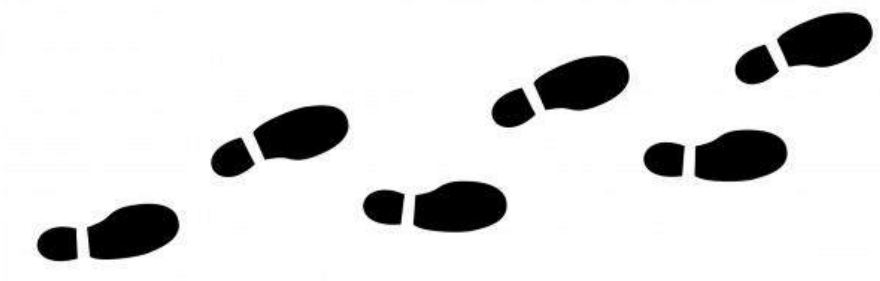
12. An object which has 1 or more right angles.

13. A book published before the last decade

14. Two clocks showing the same time in different format

    (analogue and digital format)

15. Put shoes in a line (end to end) to show a length of 2 metres.



Maths Crossword

Work out the answers of the statements below:

- 1 **tens** and 6 **units**
- Six **lots of** four
- 30 **less than** 100
- **Double** 6
- 14 **rounded to the nearest 10**
- What number **must be added** to 17 **to make 20**?
- 20 **more than** 41
- In the number 132 **which digit** is in the **units place**
- **Half** of sixty and **add 10**
- When **counting in 10s from 0**, all the numbers **end in this digit**.
- A **2 digit odd number less than 15**. Its **digits add up to 2**.
- A **single digit number** in the **3 times table**.
- 43 **take away** 30

Write the number names of the answers obtained in the crossword.

Think wisely about which number name to put in first!