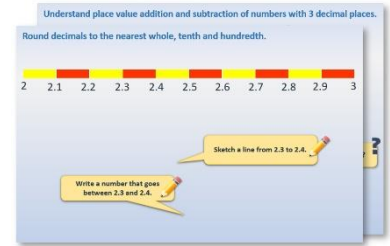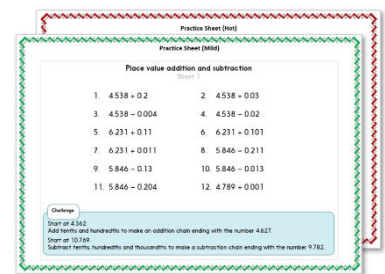# Week 9, Day 4
Block graphs

Each day covers one maths topic. It should take you about 1 hour or just a little more.
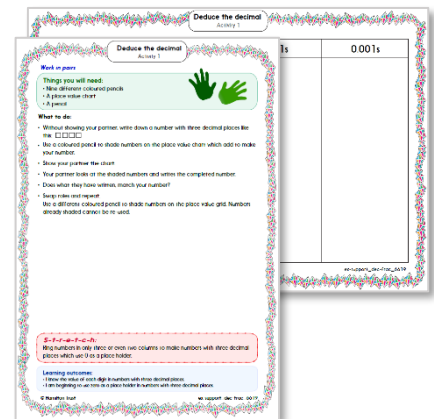
1. Start by reading through the **Learning Reminders**.
    They come from our *PowerPoint* slides.

2. Tackle the questions on the **Practice Sheet**.
    There might be a choice of either Mild (easier) or
    Hot (harder)!
    Check the answers.

3. Finding it tricky? That's OK… have a go with a
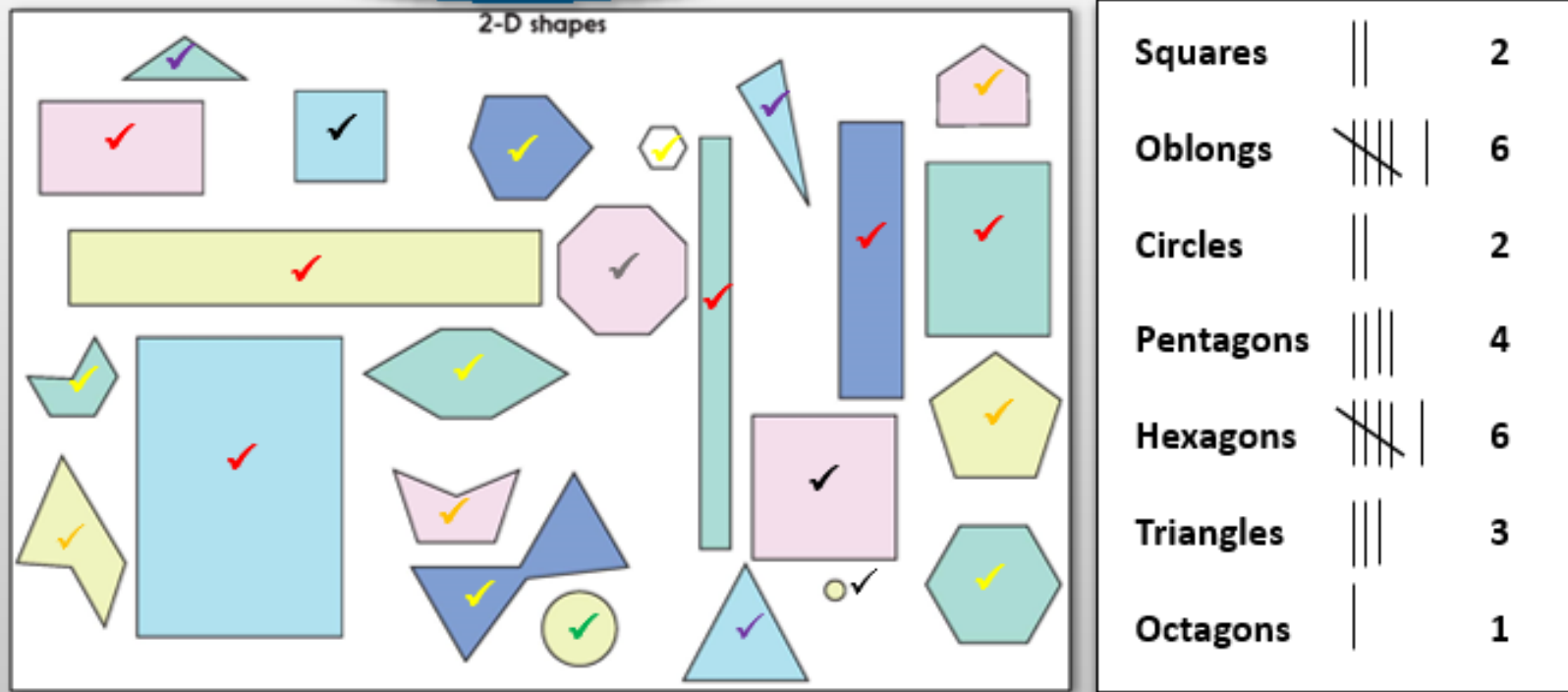   grown-up at **A Bit Stuck?**

4. Think you've cracked it? Whizzed through the Practice Sheets?
    Have a go at the **Investigation**…

Learning Reminders

Draw and interpret a block graph.

We are going to find out how many of each shape there are in this picture and display this information in a **Block Graph**.
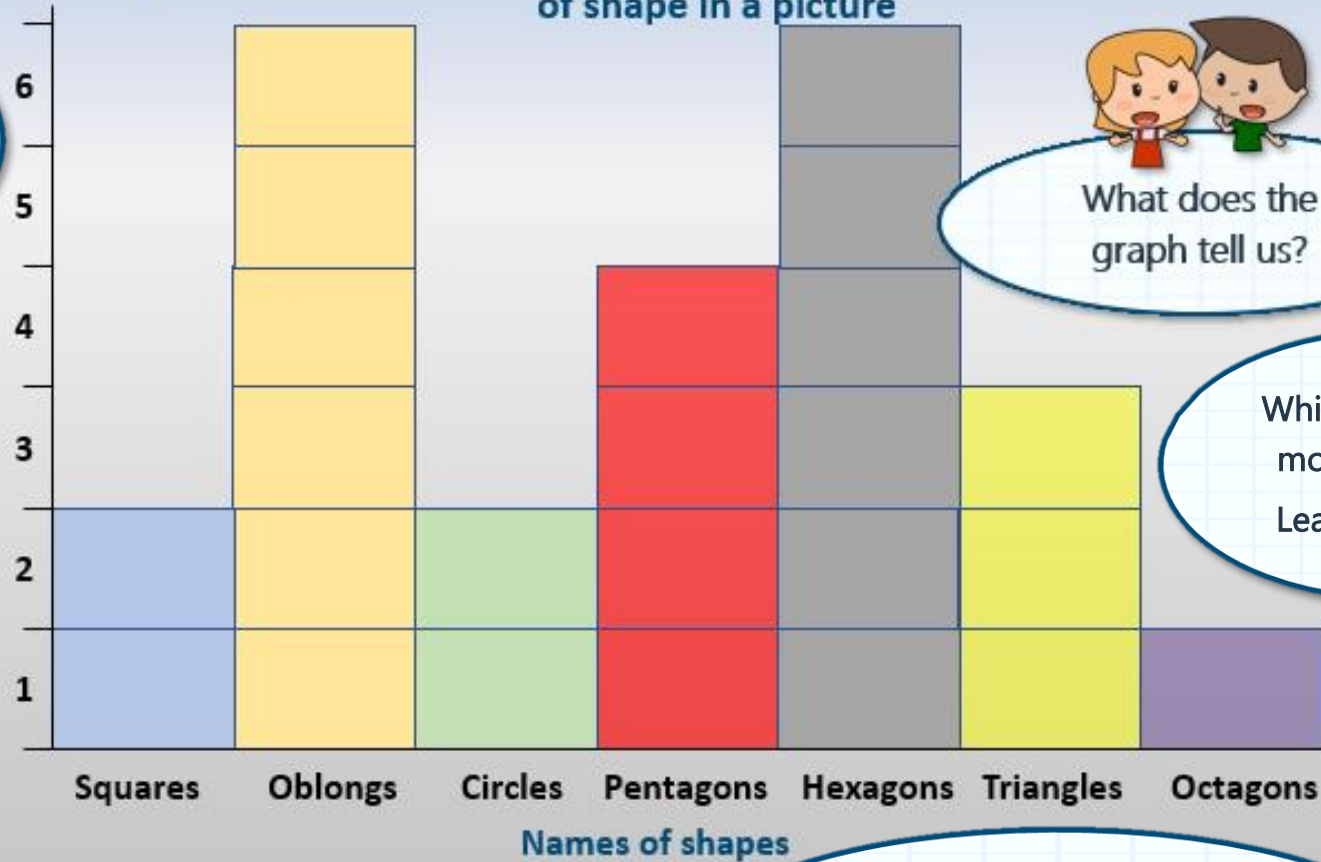
Let's count each shape and make a **tally chart**. First we'll count the **squares**...

2-D shapes

Shape	Tally	Count
Squares	||	2
Oblongs	卌 |	6
Circles	||	2
Pentagons	||||	4
Hexagons	卌 |	6
Triangles	|||	3
Octagons	|	1

Learning Reminders

Use the following information to create a block graph. Remember to include axis, labels and a title.

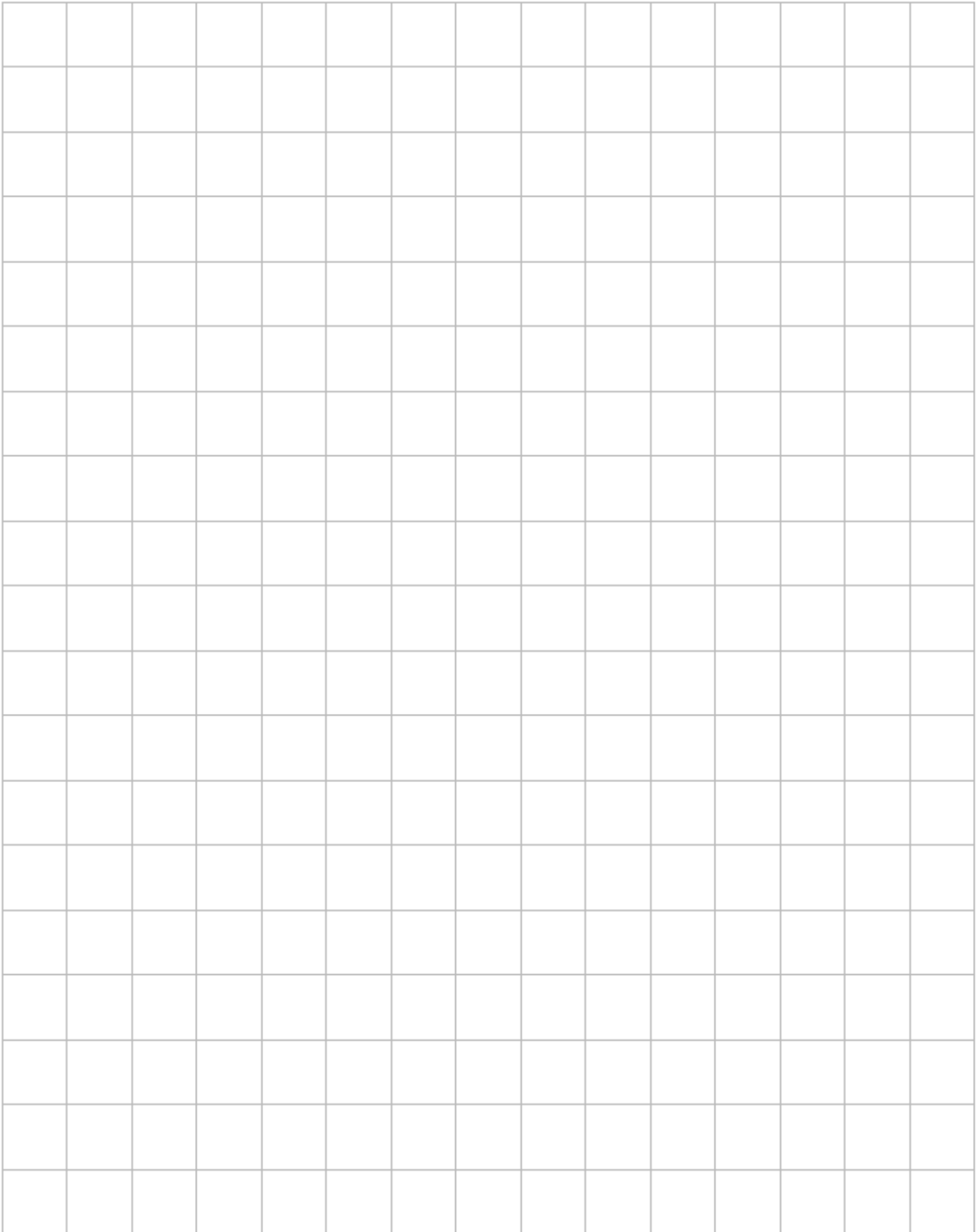| Button shape	Number of buttons
Circle	|
Square	‖‖ |
Rectangle	‖‖ ||||
Pentagon	‖‖
Hexagon	‖‖ ‖‖ |
Octagon	‖‖ |||

Challenge

Can you use the graph to make up and answer 3 questions about the shapes?
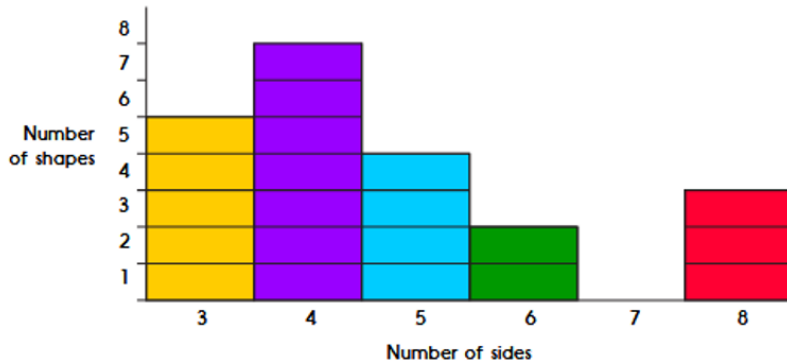
Practice Sheet Mild
Draw a block graph

Practice Sheet Hot
Shape block graphs

These block graphs were drawn about three different shape pictures

Picture 1

Picture 2
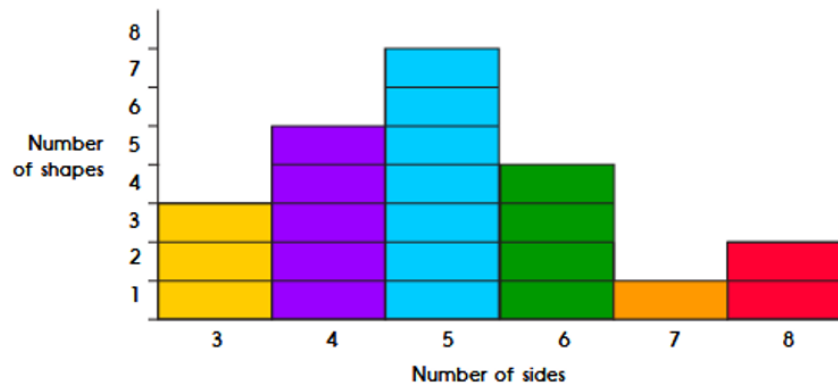
Picture 3

Can you work out which picture each clue is about...?
1. This picture has 5 triangles.
2. This picture has one more hexagon than triangles.
3. This picture has twice as many hexagons as octagons.
4. This picture has more pentagons than any other shape.
5. This picture has twice as many octagons as triangles.
6. This picture has twice as many pentagons as hexagons.

Practice Sheets Answers

Draw a block graph (mild)

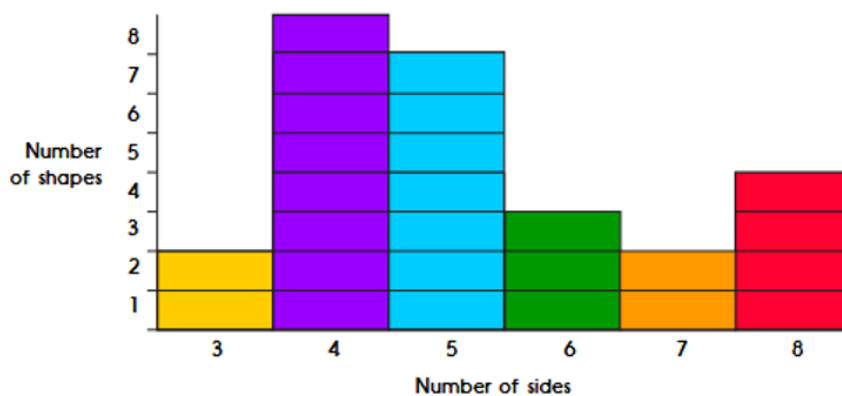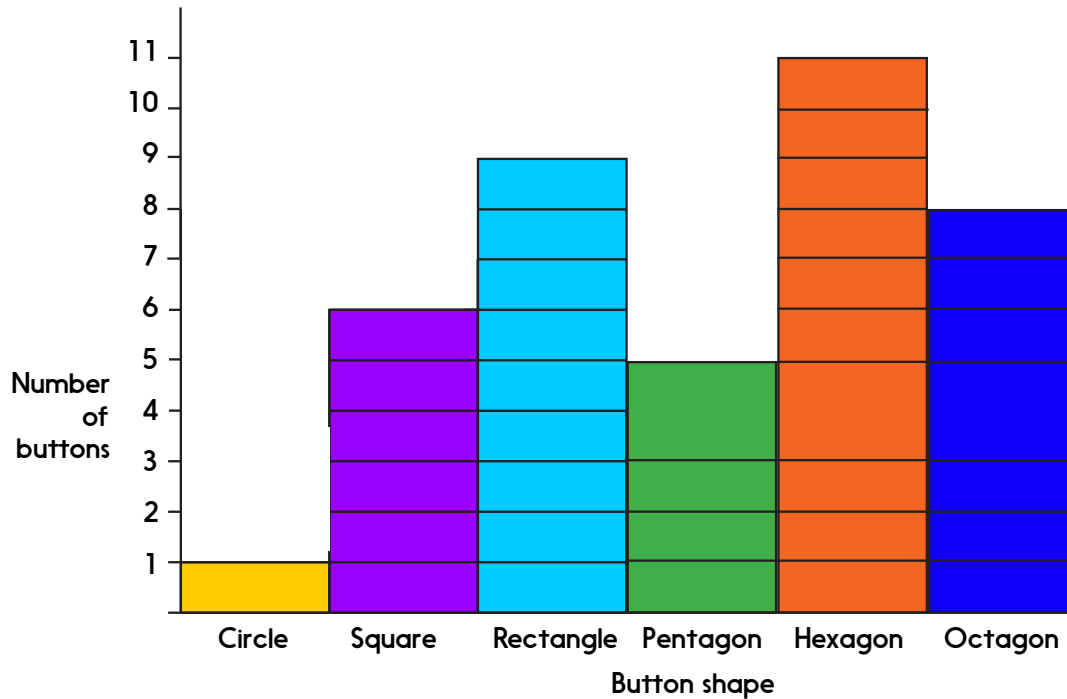**Challenge**

Questions could include:

Which shape had the least buttons? *circle*

Which shape had the most buttons? *rectangle and hexagon*

Were there more pentagon-shaped buttons than square-shaped buttons? *no more squares*

Shape block graphs (hot)

1. This picture has 5 triangles. Picture 1.
2. This picture has one more hexagon than triangles. Picture 3.
3. This picture has twice as many hexagons as octagons. Picture 2.
4. This picture has more pentagons than any other shape. Picture 2.
5. This picture has twice as many octagons as triangles. Picture 3.
6. This picture has twice as many pentagons as hexagons. Picture 1.

- Write the first names of five people in your family in the grey spaces on the horizontal axis of the graph.

- Count the number of letters in each name and write it by the side.

- Colour in a block for each letter to produce a block graph to show the length of the names.

12					
11					
10					
9					
8					
7					
6					
5					
4					
3					
2					
1					

Your name
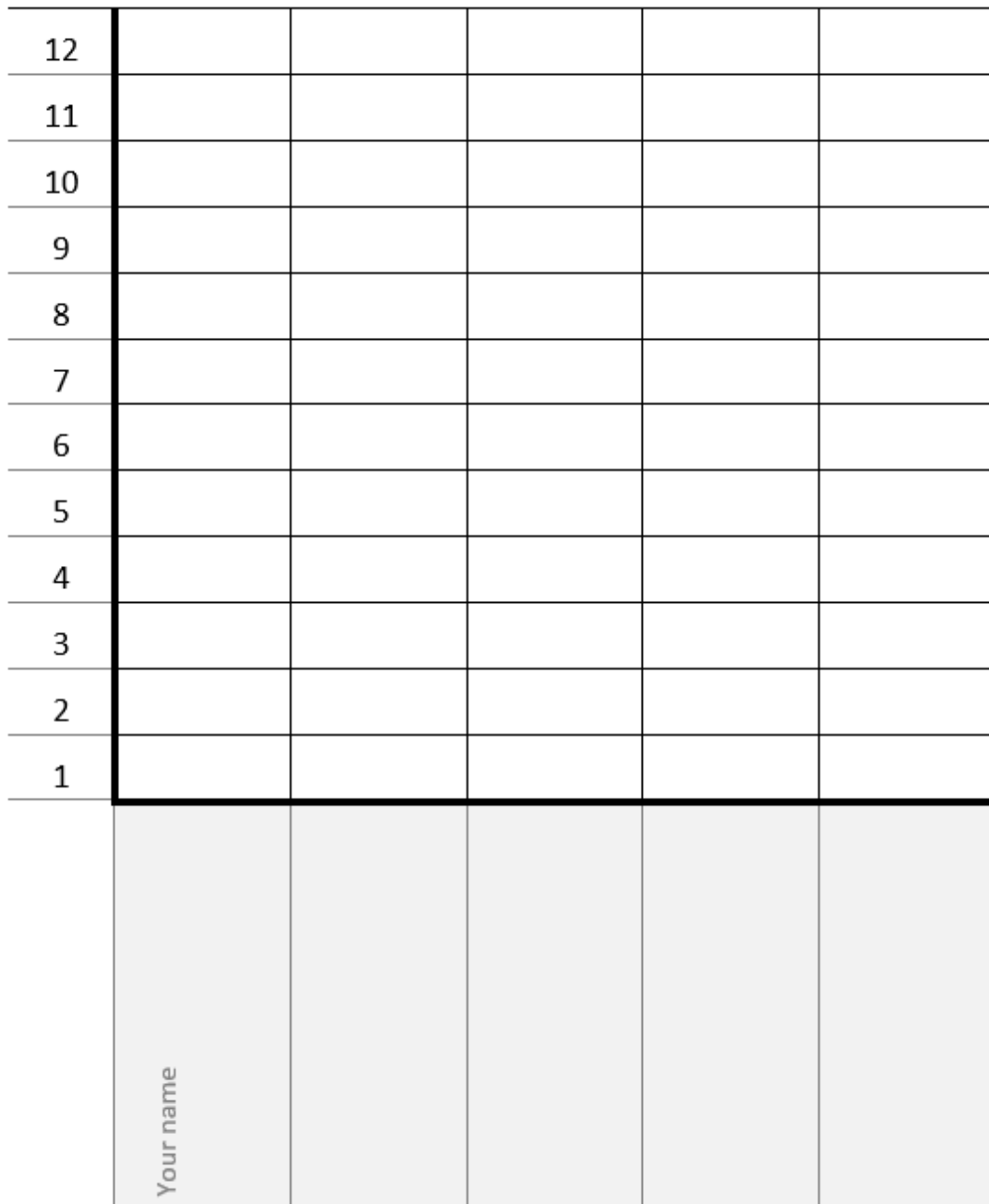
1.   Who has the longest name?
2.   Who has the shortest name?
3.   What is the difference between the longest and shortest name?
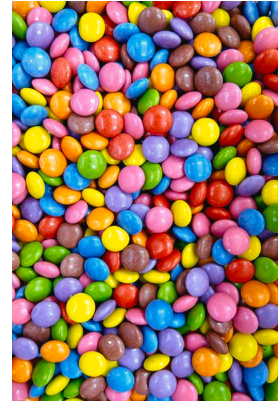
Investigation
Sweeties

You will need:

- a tube of Smarties (or other pack of sweets that has different colours)
- two bowls
- coloured pencils
- Sweeties graph

What to do:

1. Wash and dry your hands.
2. Tip the Smarties into a bowl.
3. **Just by looking**, which colour do you think is most common?
4. Which colour do you think is least common?

Count all the red Smarties as you transfer them into the other bowl. Colour in one block for each red Smartie in the graph. Repeat for each colour.

What does your graph show you?
Write 2 or 3 sentences to describe your observations.

Were you correct about the most and least common colours?

Were there any surprises?

Investigation
Sweeties block graph

10								
9								
8								
7								
6								
5								
4								
3								
2								
1								

red	orange	yellow	green	blue	violet	pink	brown	other