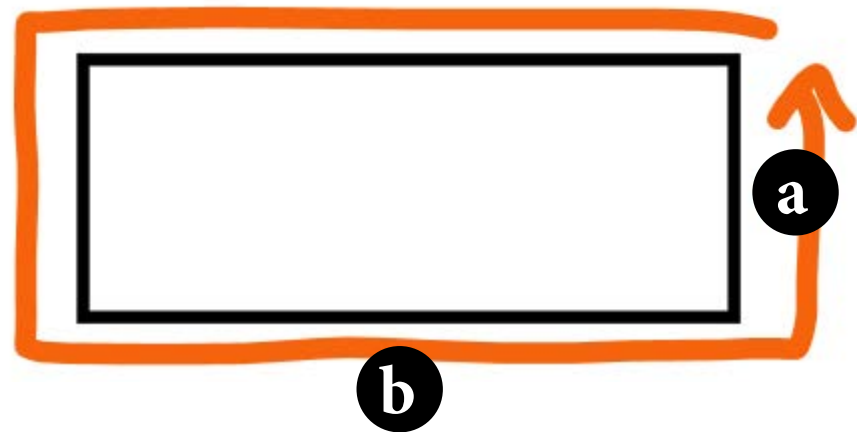## Mathematics

Compare the area and perimeter of rectangles

Today in maths you are exploring and comparing both perimeter and area.
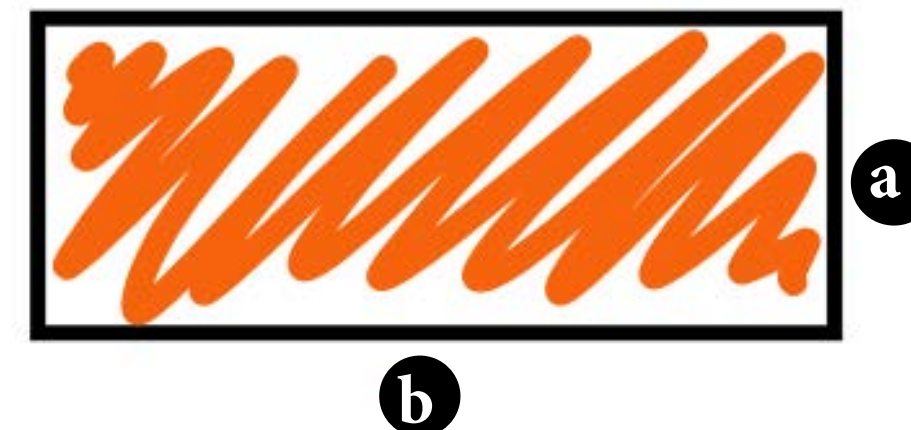
Remember perimeter is the length around a shape, you find this by adding all the sides together.

a+b+a+b = perimeter

Area is how much space is in the middle, you find this by multiplying the length and the width together.
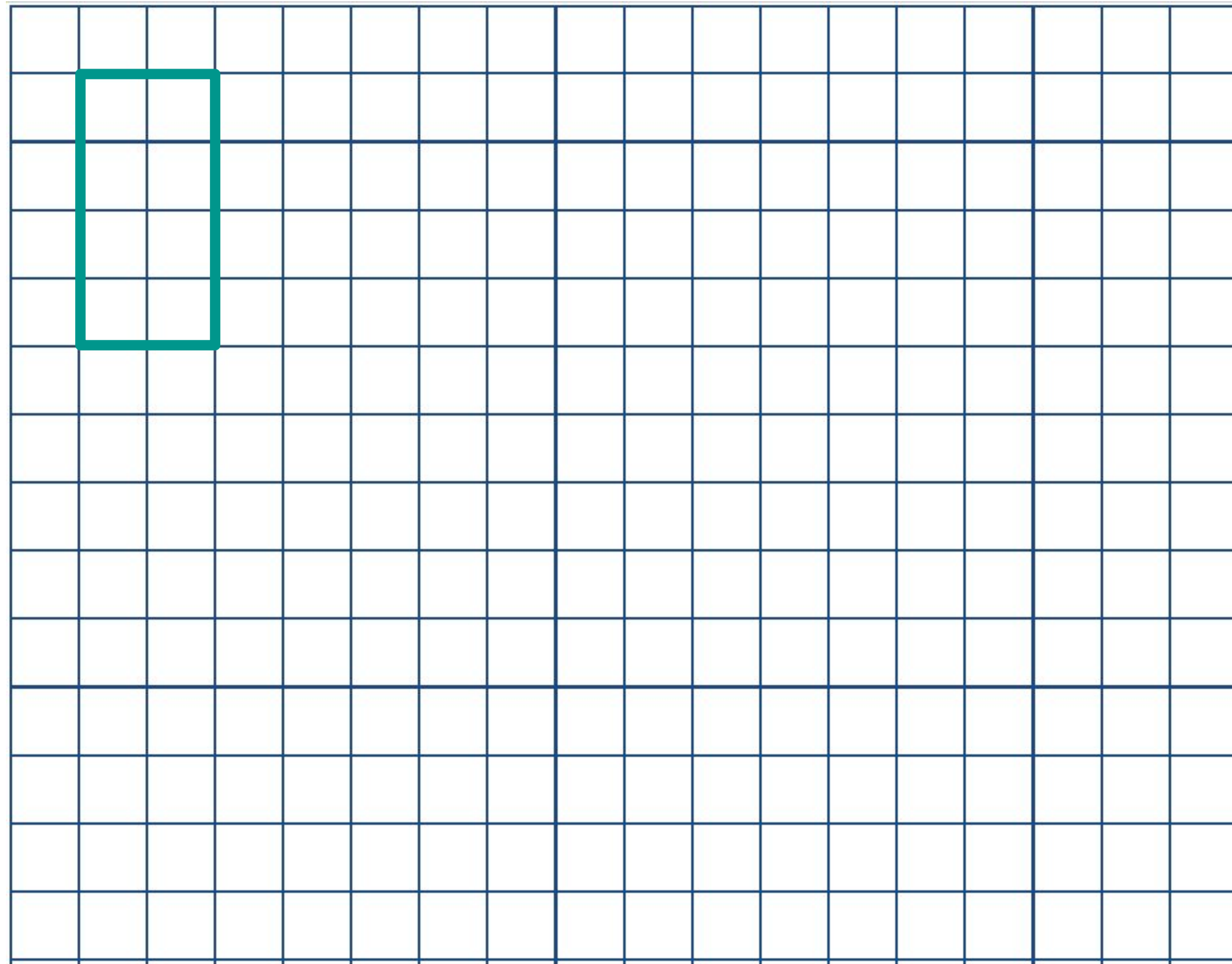
a x b = area

Warm up

How many different ways can you find to make rectilinear shapes with a perimeter of 12 units?

Why have I used the word units and not centimetres?
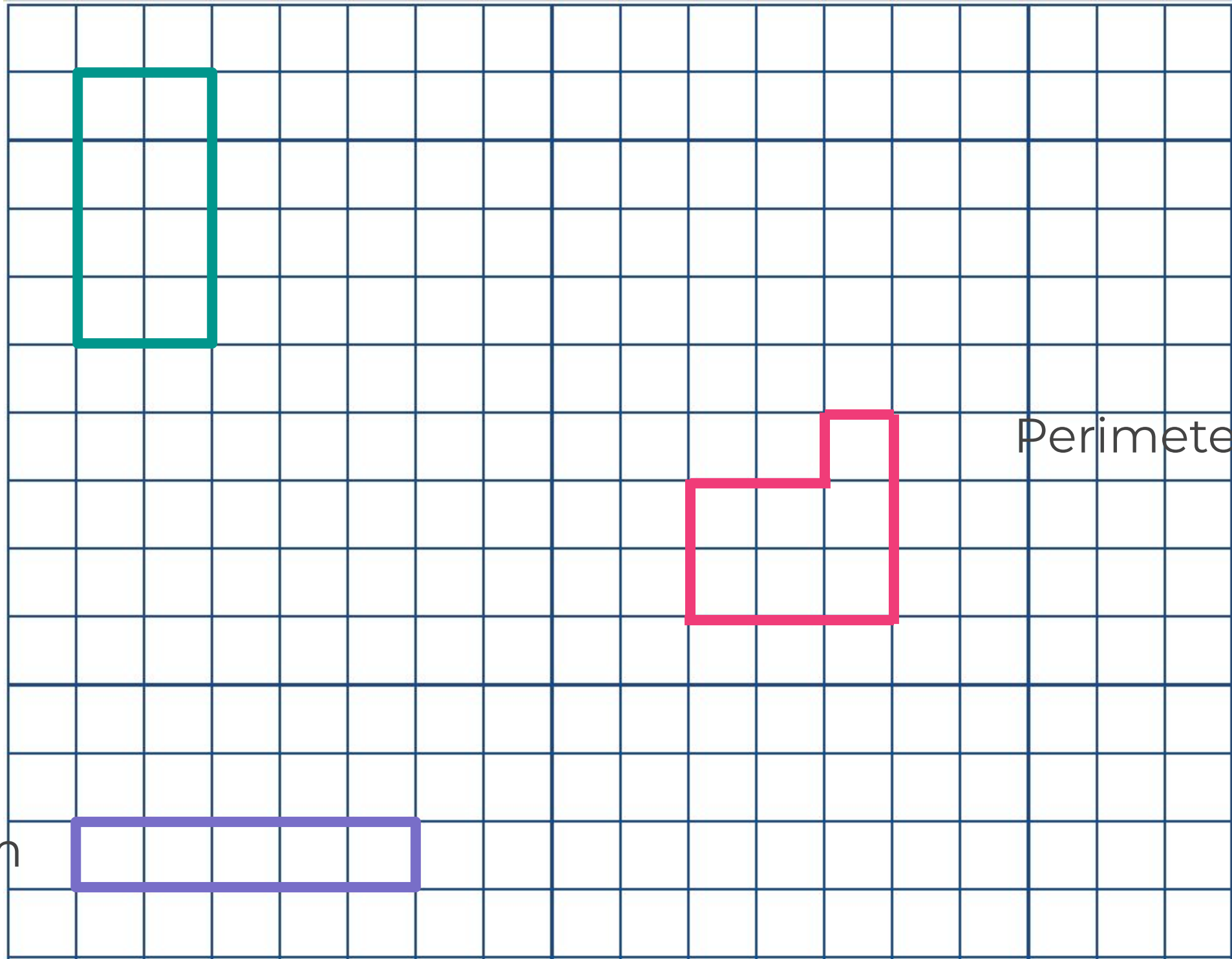
2 + 2 + 4 + 4 = 12 units

What do you think of the following statement?

Perimeter = 12 cm

The value of the perimeter of a shape will always be greater than the value of the area.

Perimeter = 12 cm

Perimeter = 12 cm

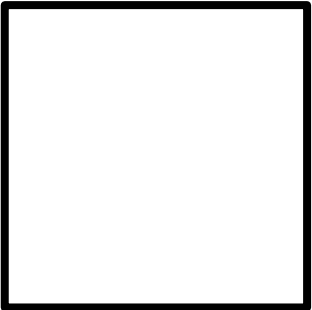# Explore this statement

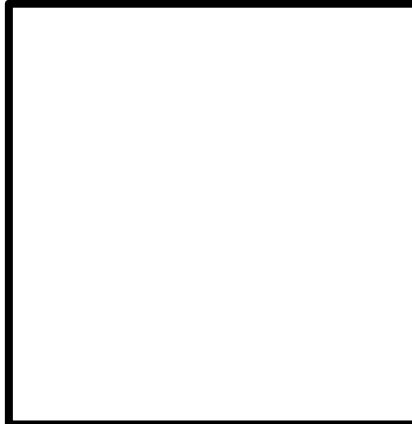*The area of a square will always have a greater value than the perimeter.*

*images are not drawn to scale

6 cm

5 cm

Perimeter =
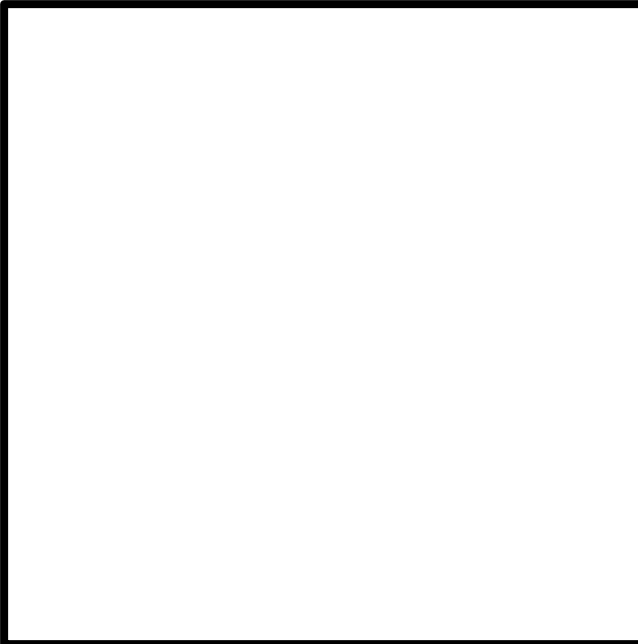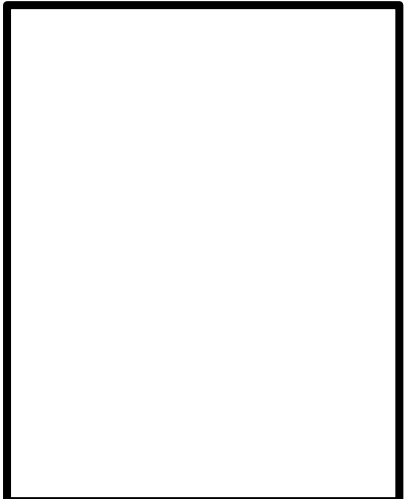
Area =

Perimeter =
Area =

24 cm

10 cm

Perimeter =

Area =

Perimeter =
Area =

How can we describe the area and perimeter of the following rectangles?

b cm

a cm

Perimeter:

Area:

d cm
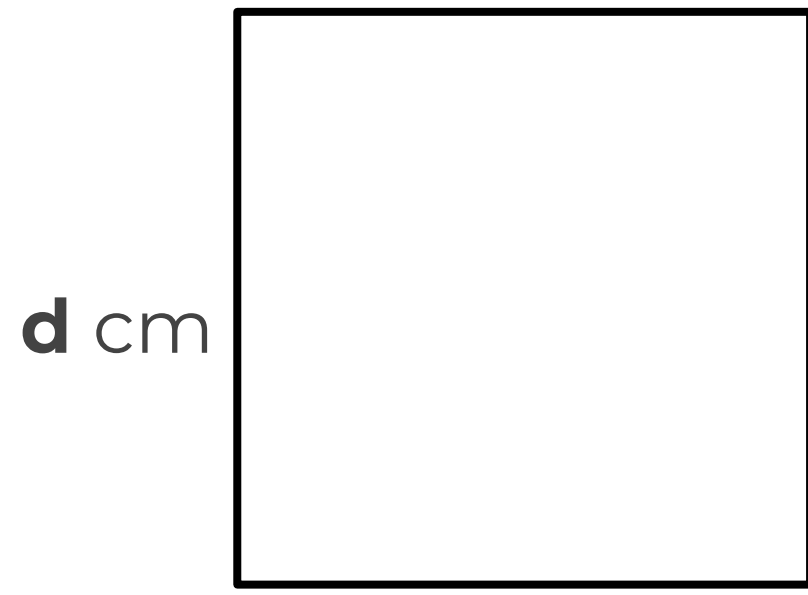
Perimeter:

Area:

Independent task

Investigate the perimeter and area of rectilinear shapes.

a) How many different rectilinear shapes can you find with a perimeter of 12 cm?

b) How many rectilinear shapes can you find with an area of 12 cm^2?
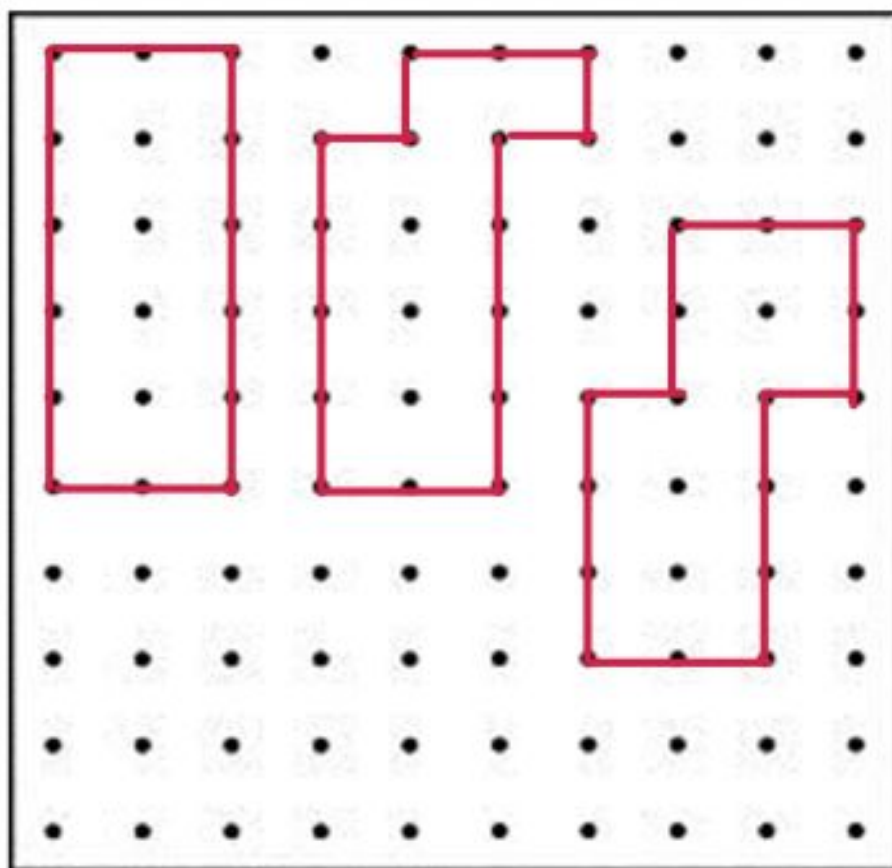
Examples of rectilinear shapes with an area of 10 cm²

Kensuke's Kingdom

By Michael Morpurgo

Chapter 7 – pg 104 – 108

Inference

1) Why is Michael thankful that Kensuke never leaves for long (pg104)?

_____
_____
_____

2) Why does Kensuke paint a lot of "Japan trees" (pg 105)?

_____
_____
_____

3) Why do you need to stand still when spear fishing (pg 106)?

_____
_____
_____

4) Why were the Orangutans nervous about Stella and Michael (pg 106)?

_____
_____
_____

Predication

Michael wonders about where all of Kensuke's stuff has come from (pots, pans, sheets, tools, etc.) Where do you think these have come from? How do you think Kensuke ended up on the island?

_____
_____
_____
_____
_____
_____
_____
_____

The Build Up and the Problem

The Build Up

This is the point in the story where we begin our journey or adventure. Our character knows what they want to do or need to find.

Example:

Kensukes Kingdom – Michael and his family have bought a boat and decided to travel around the world. They begin travelling and Michael starts writing a log about boat life.

This is building up to the moment Michael falls into the water.

Planning a build up:

What is your adventure? Eg. Michael and his family are travelling around the world on a boat.	
What are you trying to find? Eg. Michael and his family are going on this adventure because they are unhappy and have lost their jobs. They aren't looking for a physical thing but happiness and adventure.	
How are you travelling? Eg. Michael and his family are travelling by boat, sailing along the seas with their family dog.	
What is going to go wrong? Eg. Michael falls off the boat and becomes stranded on the island. He needs to find a way to survive and figure out how to get home.	

The Problem

At this point in the story, our main character has run into a problem or obstacle that's stopping them from achieving their goal, or even surviving their adventure!

Example:

Kensukes Kingdom – Michael has fallen off the boat and ended up on an island. He has no way of communicating to his parents where his is, no way of getting off the island, no food, no water, He is stuck and doesn't know how to survive.

When planning your problem, start to think about how they are going to resolve this issue.

Eg. How are they going to escape the island? will they be rescued? Will they build a boat an sail to another island?

Start writing your build up and problem below.

Try to include dialogue in your writing

Eg.

"How are you today?" I asked Miss Bishop, she shook her head and sighed.

"I'm not great today, my train got cancelled so I was late to school!"

_____

_____

_____

_____

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9

How are mountains formed?

1. How many layers is the Earth made of?

| 1 | 4 | 3 | 5 |

2. What is the name of the supercontinent?

| all lands | continental drift | Asia | Pangaea |

3. What layer of the Earth do we live on?

| outer core | crust | mantle | inner core |

4. How many tectonic plates are there?

| 15 | 21 | 13 | 19 |

5. Which of these plates are classed as major plates? (circle two)

| Eurasian Plate | Caribbean Plate | African Plate | Arabian Plate |

Mountains

The scientific study of mountains is called orology. A mountain is a geological landform that rises above the surrounding land. Most geologists classify a mountain as a landform that rises at least 1,000 feet (300 metres) or more above its surrounding area. A mountain range is a series or chain of mountains that are close together. A mountain may be home to many different biomes including temperate forest, taiga forest, tundra, and grassland. Around 20 percent of the Earth's surface is covered with mountains. There are mountains and mountain ranges in the ocean. Many islands are the tops of mountains.

1) What is orology?

_____

_____

2) How tall does the land have to rise above its surrounding areas to be classified as a mountain?

_____

_____

3) What is a mountain range?

_____

_____

4) Name 2 biomes that a mountain may be home to.

_____

_____

5) Are there mountains under the ocean? Yes/No

Match the number to the correct definition.

A **summit** or **peak** is the top of the mountain.	A **slope** is an area of ground increasing in height.
A **foot** is the bottom of the mountain.	A **valley** is an area of low land between the mountains.
A **treeline** is the highest point forests are found.	A **face** is the 'side' of a mountain.
A **snow line** is where ice and snow cover the mountain all year.	A **plateau** is an area of flat, high ground.

How are mountains formed?

Mountains are most often formed by movement of the tectonic plates in the Earth's crust. Great mountain ranges like the Himalayas often form along the boundaries of these plates

The Himalayas

The Himalayas are a mountain range in South Asia. The word "Himalaya" means 'house of snow' in Sanskrit, an old Indian language. The Himalayas are the tallest mountains in the world. This mighty range stretches 1,500 miles from east to west, across Bhutan, Nepal, India, Tibet, China, Pakistan, and Afghanistan.

1) Where are the Himalayas located?

_____

2) What does the word 'Himalaya' mean?

_____

3) How big are the Himalayas?

_____

4) Name 4 countries the Himalayas pass through.

_____