HOME LEARNING

YEAR 6

13/05/2020

Morning Message

Good morning year 6,

Today's facts of the day:

You can hear a blue whale's heartbeat from more than 2 miles away.

A baby puffin is called a 'puffling'.

4 times as many people speak English as a second language compared to a native one.

Answer to yesterday's riddle: *rubbish bin.* Today's riddle: *Look at me one way and I'll weigh a lot. Turn me around and you'll see that I'm not. What am I?*

Remember if you have any riddles or facts that you would like to share, then include them in comments section when handing in your Purple Mash work

Mr Larke and Ms Yerlisu

Today's Picture

Writing

Imagine that a spaceship has been built to transport tourists to space. Your task is to create an advert selling the experience to potential customers. What facilities does it contain? Swimming pool? Sauna? What are the sleeping arrangements like? Restaurants? Cinema? Where does it visit in space? What is its name?

Tips for success:

- make it bright, bold and well-presented

- include persuasive language: modal verbs, enticing vocabulary

- use a mixture of formal and informal language

Reading

Day 3: Teacher-led questions

Answer in full sentences.

1. **Why is the tiger waiting and watching in silence? (page 1)**
2. **What season do you think it is? Why? (page 1)**
3. **What does the word *reluctantly* tell us about how Tim feels about cleaning? (page 1)**
4. **Who does the bull remind Tim of? (page 2)**
5. **What nickname does Leo give to Tim? (page 2)**
6. **Why does the vase 'wobble alarmingly'? (page 2)**
7. **Have you ever broken anything? Were you able to fix it?**

Area and Perimeter of Unit Squares

In this lesson, you will explore how to calculate area and perimeter using unit squares. You will find the area of shapes by counting individual squares.

KEY LANGUAGE- Area, perimeter, unit, space, around, distance

Area using unit squares

Area is the amount of flat space a shape has inside its edges or boundaries.

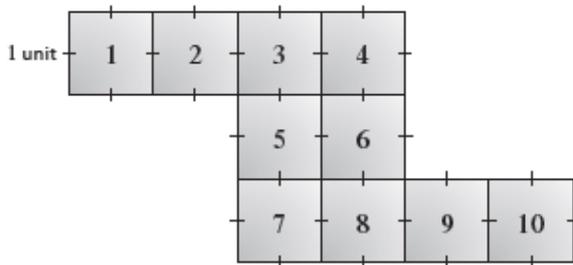A unit square is a square with each side exactly one unit of measurement long.
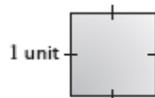
1 unit

Little dashes on each side mean they are all the same length.

Area $(A) = 1$ square unit

$= 1 \text{ unit}^2$ (in shorter, units form)

So the area of the shaded shape below is found by simply counting the number of unit squares that make it.

1 unit	1	2	3	4
		5	6	
	7	8	9	10

Area $(A) = 10$ square units

$= 10 \text{ unit}^2$

Here are some examples including halves and quarters of unit squares:
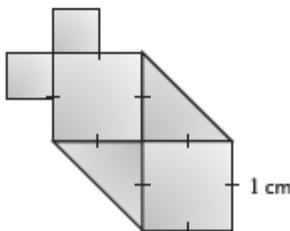
Calculate the area of these shapes

(i)

1 unit
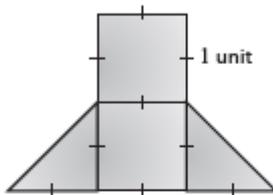
Area $(A) = 2$ whole square units $+ 2$ half square units

$= 2 \text{ square units} + 2 \times \frac{1}{2} \text{square units}$

$= (2 + 1) \text{ square units}$

$= 3 \text{ units}^2$

When single units of measurement are given, they are used instead of the word 'units'.

(ii)

1 cm

Area $(A) = 2$ whole squares $+ 2$ half squares $+ 2$ quarter squares

$= 2 \text{ square cm} + 2 \times \frac{1}{2} \text{ square cm} + 2 \times \frac{1}{4} \text{ square cm}$

$= (2 + 1 + 0.5) \text{ square centimetres}$

$= 3.5 \text{ cm}^2$

Perimeter using unit squares

The word perimeter is a combination of two Greek words peri (around) and meter (measure).

Finding the perimeter (P) means measuring the distance around the **outside**!

Start/end of path around the outside
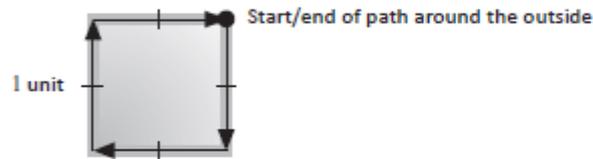
1 unit

$$\text{Perimeter}\,(P) = 1\,\text{unit} + 1\,\text{unit} + 1\,\text{unit} + 1\,\text{unit}$$
$$= 4 \times 1\,\text{unit}$$
$$= 4\,\text{units}$$

Remember, little dashes on each side mean they are all the same length.

These examples shows that we only count all the outside edges.

Calculate the perimeter of these shapes formed using unit shapes

(i)

2 units

1 unit   1 unit

2 units

Start/end of path around the outside
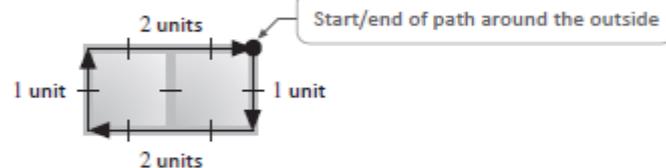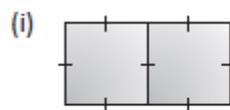
$$\text{Perimeter}\,(P) = 1 + 2 + 1 + 2 \;\text{units}$$ Sides of unit squares inside the shape not included
$$= 6\,\text{units}$$

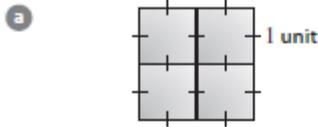It does not matter where you start/finish, but it is usually easiest to start from one corner.

(ii)

1 unit

3 units

1 unit   1 unit

1 unit   1 unit

1 unit   1 unit

1 unit

Start/end of path around the outside
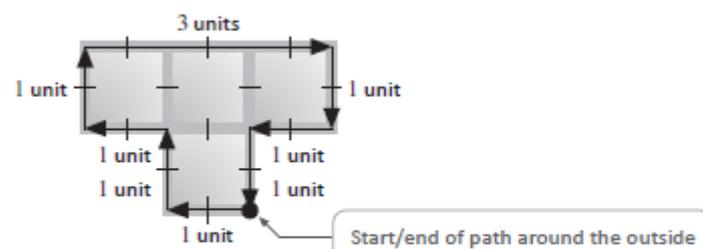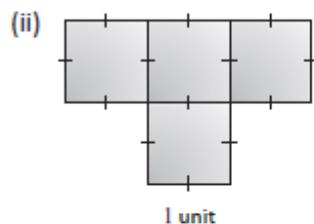
$$\text{Perimeter}\,(P) = 1 + 1 + 1 + 1 + 3 + 1 + 1 + 1 \;\text{units}$$
$$= 10\,\text{units}$$

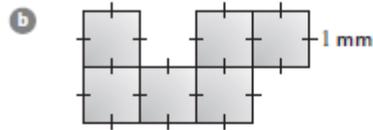## Area using unit squares

1. Calculate the area of all these shaded shapes:

a

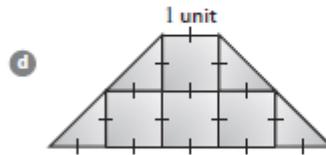— 1 unit

Area = [ ] whole squares

= [ ] units^2

b

— 1 mm

Area = [ ] whole squares

= [ ] mm^2

c

1 m
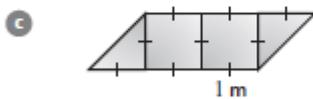
Area = [ ] whole + [ ] half squares

= [ ] m^2 + [ ] × $\frac{1}{2}$ m^2

= [ ] m^2

d

1 unit

Area = [ ] whole + [ ] half squares

= [ ] units^2 + [ ] × $\frac{1}{2}$ units^2

= [ ] units^2

e

1 unit
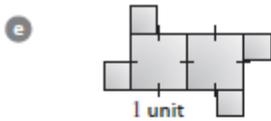
Area = [ ] whole + [ ] quarter squares

= [ ] units^2 + [ ] × $\frac{1}{4}$ units^2

= [ ] units^2

f

— 1 cm
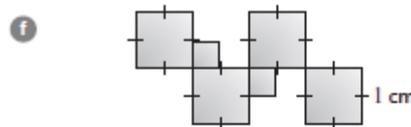
Area = [ ] whole + [ ] quarter squares

= [ ] cm^2 + [ ] × $\frac{1}{4}$ cm^2

= [ ] cm^2

g

1 unit
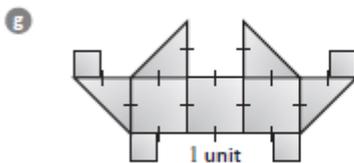
Area = [ ] whole + [ ] half + [ ] quarter squares

= [ ] units^2 + [ ] × $\frac{1}{2}$ units^2 + [ ] × $\frac{1}{4}$ units^2

= [ ] units^2

e

1 unit

Area =

f

1 mm

Area =

g

1 km

Area =

h

1 cm

Area =

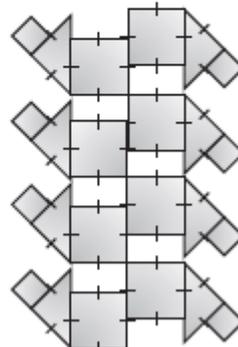AREA USING UNIT SQUARES * AREA USING UNIT SQUARES * AREA USING UNIT SQUARES *
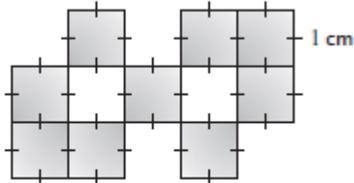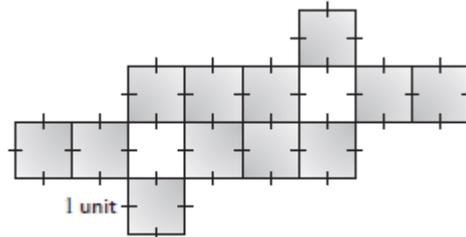
...../...../20.....
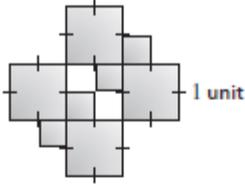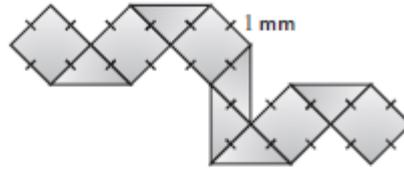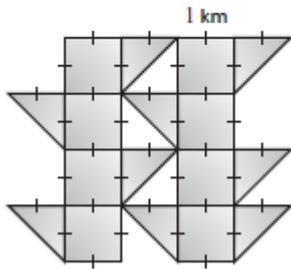
2 Calculate the area of these shaded shapes, using the correct short version for the units:

a

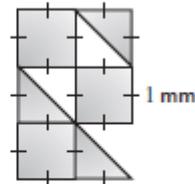1 cm

Area =

b

1 unit

Area =

c

1 m

Area =

d

1 mm
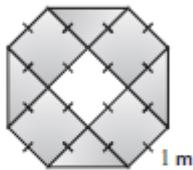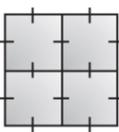
Area =

Perimeter using unit squares

1 Calculate the perimeter of these shaded shapes:

a

1 unit

Perimeter = ☐ + ☐ + ☐ + ☐ units

= ☐ units

b

1 unit

Perimeter = ☐ + ☐ + ☐ + ☐ units

= ☐ units

c

1 unit
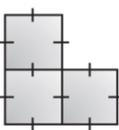
Perimeter = ☐ + ☐ + ☐ + ☐ + ☐ + ☐ units

= ☐ units

2 Write the length of the perimeter (*P*) for each of these shaded shapes:

a   **b**   **c**   **d**
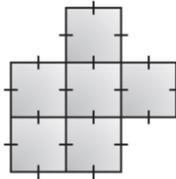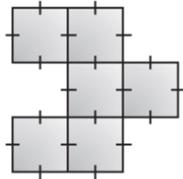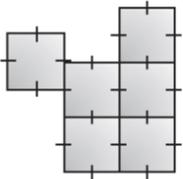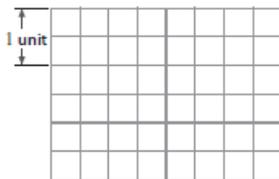
P = ☐ units   P = ☐ units   P = ☐ units   P = ☐ units

3 The shaded shapes in **2** all have the same area of 6 units².
Use your results in question 2 to help you explain briefly whether or not all shapes with the same area have the same perimeter.

EXTENSION

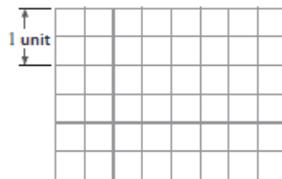**3** Shade shapes on these square grids to match the area written in square brackets.

a [8 units²], using whole squares only.   **b** [5 units²], include half squares in your shape.
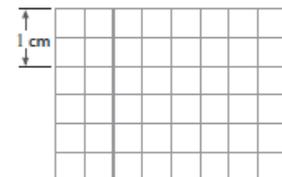
1 unit   1 unit

c [3 mm²], include quarter squares in your shape.   **d** [4.5 cm²], include halves and quarters.
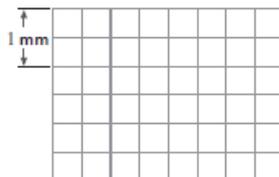
1 mm   1 cm

Weekly Spellings

We have finished learning and revising all the the year 5 and year 6 spelling patterns and words. Your job now is to take some responsibility for your own learning and evaluate which words and which types of spelling patterns you need to continue to revise before year 7. From looking at last week's test, and the spelling section of the KS2 National Curriculum (ask an adult for help), you should have an idea of which patterns you need to revise most. We will be providing 15 additional tricky words each week for you to learn but these are not compulsory. It is more important that you revise all the spelling patterns from the KS2 National Currciulum first.

1. biased
2. hypothesis
3. medieval
4. jewellery
5. permanent
6. possession
7. vegetable
8. renewable
9. alliteration
10. analysis
11. ingredients
12. reference
13. ceremony
14. specimen
15. personification

Foundation Topic Work (for the week)

This week we will researching information about the Islamic holy month of Ramadan. Use the internet, any books you have on the subject and talk to your family. The task has been set on Purple Mash – use the template to present what you have learnt. Hand in to your teacher by Friday.

Diary

Write a diary of what work and activities you did today. Remember to include your thoughts, feelings and opinions.