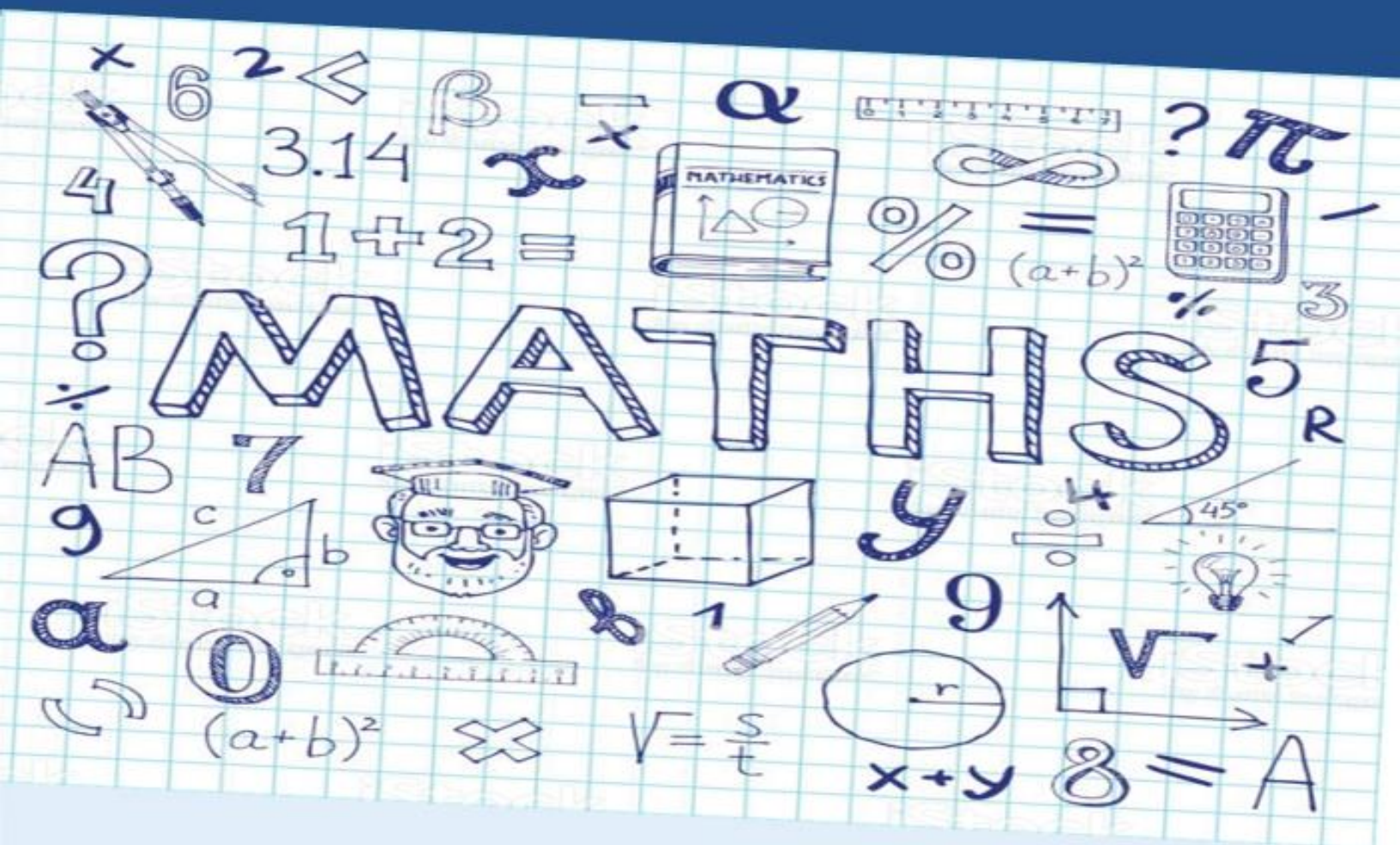


# Maths

## Resource Pack

Week 1

Entry Level 3 & Level 1 Activities



## Activity 1: Cinema

### Information: Numbers and calculations


#### Problem to solve

**Your birthday is coming up. You plan a trip to the cinema with 4 friends and then a meal to celebrate. Work out the cost of the evening.**

The film you want to watch lasts for **2 hours** and the restaurant is near the cinema.

You have booked a table at the restaurant for **8pm**.

**Work out the cost of the evening. (You are all adults.)**

REX CINEMA FILM TICKET PRICES	Super saver Monday to Thursday before 5pm	Peak Monday to Thursday after 5pm	The Restaurant
Child (12 years and under)	£4.75	£5.65	Set meals
Student	£5.25	£6.20	2 courses £15
Senior age 60+	£5.25	£6.20	3 courses £20
Adult age 18+	£6.40	£7.60	
Family ticket (2 adults, 2 children)	£19.00	£22.60	
Films are showing at 3.30pm, 5.30pm and 8pm			

#### Your tasks:

1. Work out the cost of film tickets for you and 4 friends
2. Work out the total cost of dinner if everyone orders 2 courses
3. Find out the total cost of the evening.

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## Activity 1: Cinema

### Problem solving: Numbers and calculations

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**Problem  
to solve**

**Your birthday is coming up. You plan a trip to the cinema with 4 friends and then a meal to celebrate. Work out the cost of the evening.**

**Key findings:**

Time the film ends	
Cost of the film ticket (per adult)	
Cost for the meal (per adult)	

**How long does the film last?**

**What's the best time to see the film so that you don't have to wait long after the film ends to eat dinner?**



**How many people in total will be going to the cinema and the meal?**

**How much will the tickets and the meal cost?**

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## Activity 1: Cinema

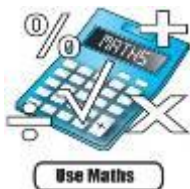
### Worksheet: Numbers and calculations

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**Problem  
to solve**

**Your birthday is coming up. You plan a trip to the cinema with 4 friends and then a meal to celebrate. Work out the cost of the evening.**

**Work out the cost of your evening, here.**



**Show your calculations and how you check your work.**

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### Activity 1: Cinema

#### Worksheet: Numbers and calculations

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**Problem  
to solve**

**Your birthday is coming up. You plan a trip to the cinema with 4 friends and then a meal to celebrate. Work out the cost of the evening.**

**Now present your key findings here:**



Write your decisions and give the reasons for your choice. Include any information you need, to plan your evening.

Show how you have checked your work.

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## Activity 1: Cinema

### Skills check: Numbers and calculations

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**Problem  
to solve**

**Your birthday is coming up. You plan a trip to the cinema with 4 friends and then a meal to celebrate. Work out the cost of the evening.**

**Think about what you have done:**

What skills have you used?

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**Improve your work:**

- **How much would a family (2 adults and 2 children) save by buying the family ticket at peak time?**
  
- **What would be the difference in cost to your evening out if 2 people had decided to have the 3 courses?**

**Show your work.**

## Activity 2: Best buys

### Information: Numbers and calculations

**Problem to solve**

You have been asked to get 10 litres of Coke for a party. You want to get a good deal. What is available at the shops?



Deal A

**COKE/DIET COKE**  
2 litres  
**3 FOR £3.00**  
or  
**£1.50 for 1**



**SHOP LOCAL**

Deal C

**SPECIAL OFFER**

**2 litres COKE**

**Only £1.25**



Deal B

**COKE/DIET COKE**  
2 litres  $\times 4$

**£5.99**

**Your tasks:**

1. Work out the best deal to buy 10 litres of Coke
2. Present your findings in a table
3. Check your work.



## Activity 2: Best buys

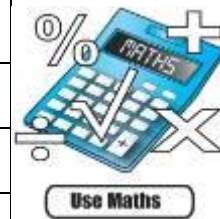
### Problem solving: Numbers and calculations

**Problem  
to solve**

**You have been asked to get 10 litres of coke for a party. You want to get a good deal. What is available at the shops?**

**Key findings:**

How many bottles of Coke will give 10 litres?	
Do I need to use just 1 shop or 1 deal?	
What is the best deal?	
What is the price per litre for the best deal?	



**How many bottles do you need to buy?** You need to make sure you buy enough.

**What is the price per 2-litre bottle?** This will help you find the best deal.

Deal A:

Deal B:

Deal C:



**Would it matter if you bought extra?**



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## Activity 2: Best buys

### Worksheet: Numbers and calculations

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**Problem  
to solve**

**You have been asked to get 10 litres of Coke for a party. You want to get a good deal. What is available at the shops?**

**Use this space to work out the best deal for the Coke.**



**Show your working and how you have checked them.**

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## Activity 2: Best buys

### Worksheet: Numbers and calculations

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**Problem  
to solve**

**You have been asked to get 10 litres of Coke for a party. You want to get a good deal. What is available at the shops?**

**Now present your key findings in a suitable table.**



**Write your decision here and give the reasons for your choice.  
Show how you have checked your work.**

## Activity 2: Best buys

### Skills check: Numbers and calculations

**Problem  
to solve**

**You have been asked to get 10 litres of Coke for a party. You want to get a good deal. What is available at the shops?**

**Think about what you have done:**

What skills have you used?

- 
- 
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**Change your work:**

**What is the best deal?**

**Flash kitchen spray (500ml)**

**3 FOR £5**

**Normal price for 1 is £2.02**



**How much would you save?**

**Why would some people not buy 3 bottles?**

Activity 3: Budget

Information: Rounding and estimation

Problem to solve	You need to buy a gift for Tomasz, who turns 18 next month. You have just been paid. Estimate if you can spend about £50 on Tomasz’s gift after you pay your bills.
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Your budget

Wage per month	Bills to be paid	Amount
£824	Rent	£365
	Electric	£15
	Gas	£26
	Transport	£21
	Food	£85
	Phone	£18
	Going out	£120

Basic cards £1.99

Handmade cards £8.99

Gift ideas



A  
£42.94



B  
£48



C  
£54



D  
£55

Your tasks:

- 4. Round your budgets.
- 5. Work out the money you have left to spend on Tomasz’s gift
- 6. Work out which gift and card you will buy.

### Activity 3: Budget

#### Problem solving: Rounding and estimation

**Problem  
to solve**

**You need to buy a gift for Tomasz, who turns 18 next month. You have just been paid. Estimate if you can spend about £50 on Tomasz's gift after you pay your bills.**

**How will you use rounding in your estimate?**

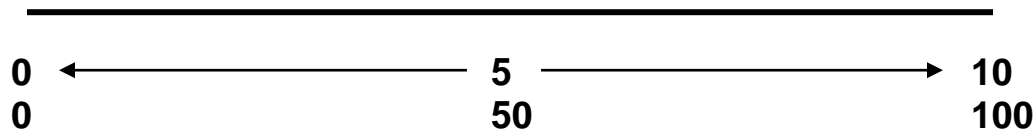
Which would be more suitable, the nearest 10 or the nearest 100?

**How will you work out the calculations to use?**

Do you need to add or subtract to work out your budget?



**Number line:**



**Remember:** if a number is more than 5, you round up; less than 5, round down.

### Activity 3: Budget

#### Worksheet: Rounding and estimation

**Problem  
to solve**

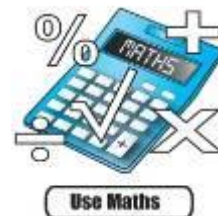
**You need to buy a gift for Tomasz, who turns 18 next month. You have just been paid. Estimate if you can spend about £50 on Tomasz's gift after you pay your bills.**

Work out your budget.

Wage per month	Rounded		Bills to be paid	Amount	Rounded
£824			Rent	£365	
			Electric	£15	
			Gas	£26	
			Transport	£21	
			Food	£85	
			Phone	£18	
			Going out	£120	
<b>Total</b>					

**Now work out how much you have left after paying the bills.**  
Show your workings and checks.

Do you have more than £50 left?



Activity 3: Budget  
**Worksheet: Rounding and estimation**

**Problem  
to solve**

**You need to buy a gift for Tomasz, who turns 18 next month. You have just been paid. Estimate if you can spend about £50 on Tomasz's gift after you pay your bills.**

**Which of these watches round to £50?**



**A**  
**£42.94**



**B**  
**£48**



**C**  
**£54**



**D**  
**£55**

**Rounded: £ \_\_\_\_\_ £ \_\_\_\_\_ £ \_\_\_\_\_ £ \_\_\_\_\_**

Which watch will you choose if you want to stick your £50 budget but also send a handmade card?

Which watch will you choose if you want to stick to budget but send just a basic card?





### Activity 3: Budget

#### Skills check: Rounding and estimation

##### Problem to solve

You need to buy a gift for Tomasz, who turns 18 next month. You have just been paid. Estimate if you can spend about £50 on Tomasz's gift after you pay your bills.

##### Think about what you have done:

What skills have you used?

- 
- 
- 
- 



##### Now try this:

You go shopping and buy a £105 coat, a £89 bag and shoes at £94.

Estimate the cost by rounding:

- To the nearest £10
- To the nearest £100

Now work out the actual cost. Is there much difference?



#### Activity 4: Cake sale

##### Information: Simple fractions

**Problem to solve**

You are helping out at a cake sale to raise money for charity. You are given some cakes to sell, but think you will make more money by cutting them into smaller pieces.

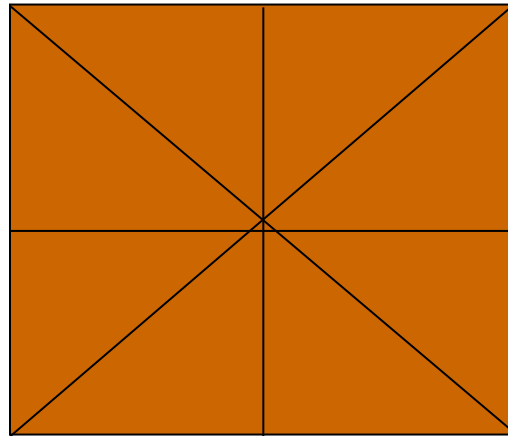
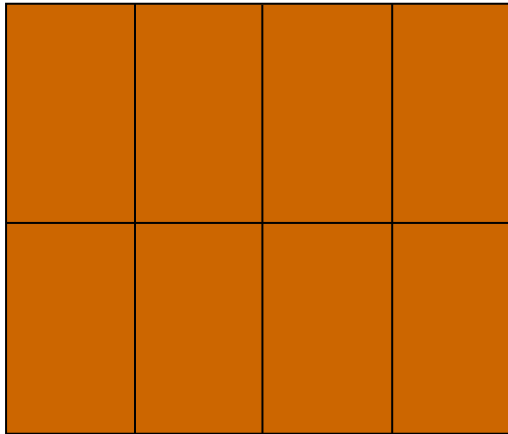
**You have been given 2 cakes to sell. Both are the same size.**



The suggested price is £2.00 each.

Your task is to work out if you could make more money if you cut the cake into small slices.

**You cut the cakes as shown below:**  
The price will be 50p per piece.



Ann thinks that the triangular portions on the right are bigger than the rectangular ones on the left. Is she correct? How do you know?

**Your tasks:**

7. Find out how much more money you can make by selling the cake in pieces
8. Check your work.

#### Activity 4: Cake sale

#### **Problem solving: Simple fractions**

##### **Problem to solve**

You are helping out at a cake sale to raise money for charity. You are given some cakes to sell, but think you will make more money by cutting them into smaller pieces.

How can you work out if Ann is correct about the triangular pieces being bigger? What fraction of the cake is each piece?

How can you work out how much each cake can be sold for? What sort of calculations do you need to use?

How can you find the difference between selling the cake whole and selling it in pieces? What sort of calculations do you need to use?

#### Activity 4: Cake sale

#### Worksheet: Simple fractions

**Problem  
to solve**

You are helping out at a cake sale to raise money for charity. You are given some cakes to sell, but think you will make more money by cutting them into smaller pieces.

#### Task 1

Is Ann correct that the triangular pieces are bigger?

Give your reasons.

#### Task 2

How much money will you get if you sell all the pieces of 1 cake for 50p each?

How much money will you get if you sell all the pieces of both cakes for 50p each?

How much more do you earn by selling pieces of both cakes rather than the 2 whole cakes?



#### Activity 4: Cake sale

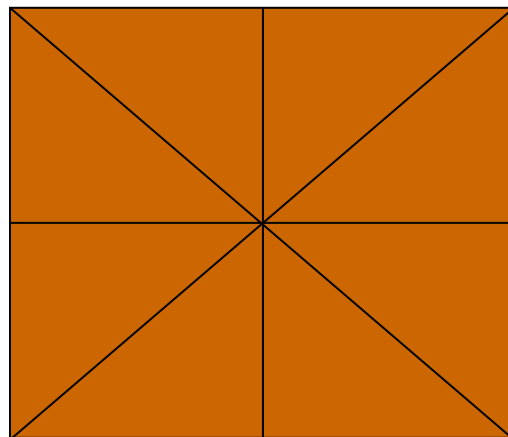
#### Worksheet: Simple fractions

**Problem  
to solve**

You are helping out at a cake sale to raise money for charity. You are given some cakes to sell, but think you will make more money by cutting them into smaller slices.

Your first customer wants 4 pieces of cake.  
What fraction of a whole cake is this?

Your next customer buys  $\frac{1}{4}$  of a whole cake.  
How many pieces is this?



Tip: Shade the cake to help you decide

You and your friends make £50 in total for the charity. £10 is from drinks.  
What fraction of the total amount is from drinks?

**Circle your answer:**

$\frac{1}{4}$     $\frac{1}{3}$     $\frac{1}{5}$     $\frac{1}{2}$

**What fraction is not from drinks?**



#### Activity 4: Cake sale

#### Skills check: Simple fractions

##### Problem to solve

You are helping out at a cake sale to raise money for charity. You are given some cakes to sell, but think you will make more money by cutting them into smaller slices.

##### Think about what you have done:

What skills have you used?

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##### Now try this:

A jacket costs £50 in a sale.

What was the original price if it is now half price?

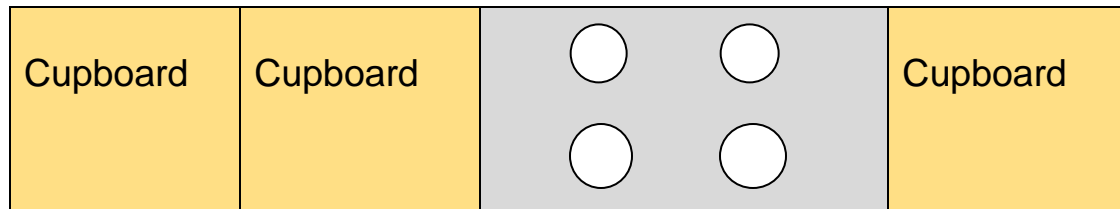


Activity 5: In the kitchen

**Information: Common measures**

**Problem  
to solve**

**You are getting a new oven for your kitchen. You want to choose the biggest one possible for the space.**



**Your kitchen has 3 single cupboards that are 50cm wide each.**



**A is 110cm**



**B is 90cm**



**C is 60cm**

**Your tasks:**

- 9.** Decide which oven to choose
- 10.** Check your work.



### Activity 5: In the kitchen

#### Problem solving: Common measures

**Problem  
to solve**

**You are getting a new oven for your kitchen. You want to choose the biggest one possible for the space.**

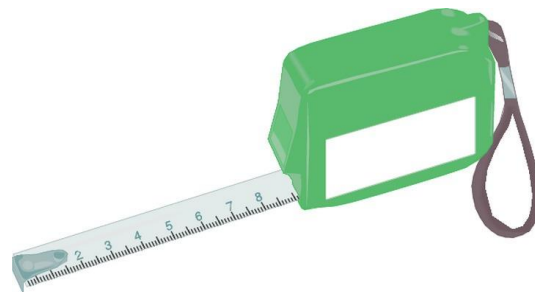
#### Key findings:

What total space do you have for an oven?	
Which oven size is the best for the space?	

#### Are the units of measure different?

Change the metre (m) to centimetres (cm) to make calculations easier.

**1m = \_\_\_\_ cm**



#### How do I calculate the space for the oven?

Think about the total length, then take away the length of the 3 cupboards.

Activity 5: In the kitchen

**Worksheet: Common measures**

**Problem  
to solve**

**You are getting a new oven for your kitchen. You want to choose the biggest one possible for the space.**

**Find out the space you have for the oven.**

Show your workings out here and how you checked your work.



**Which oven do you choose? Give your reasons.**

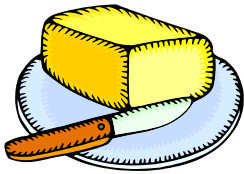
Activity 5: In the kitchen

**Worksheet: Common measures**

**Problem  
to solve**

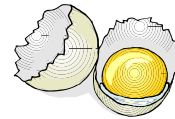
**You are getting a new oven for your kitchen. You want to choose the biggest one possible for the space.**

Your new oven arrives and you test it using the recipe below.

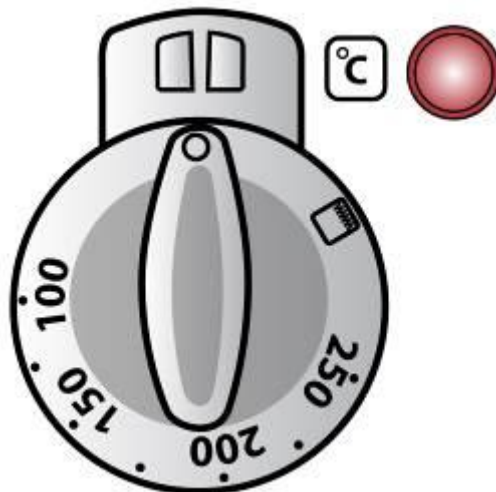


25g butter  
8 thin slices bread  
50g sultanas  
350ml milk  
50ml cream  
2 eggs  
25g sugar

- 180C for 30 mins
- Reduce to 150C for another 20 mins



Mark the starting temperature given in the recipe onto the oven dial below.



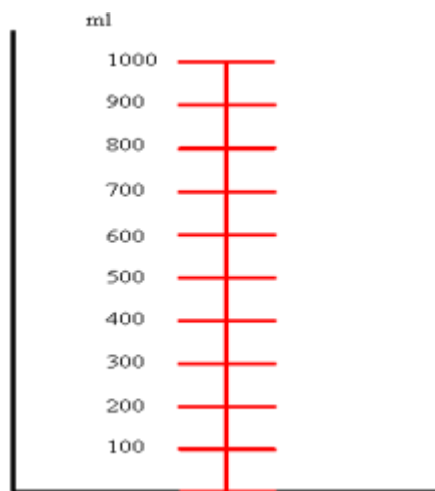
Activity 5: In the kitchen

**Worksheet: Common measures**

**Problem  
to solve**

**You are getting a new oven for your kitchen. You want to choose the biggest one possible for the space.**

You use a jug to measure the milk and the cream. Indicate the total measure of both on the jug.



A block of butter weighs 250g. You need 25g to make the recipe. Can you divide the block to allow you to cut off a 25g piece?



### Activity 5: In the kitchen

#### Skills check: Common measures

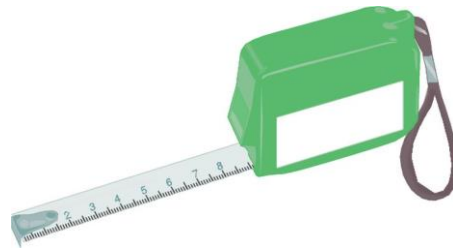
**Problem  
to solve**

**You are getting a new oven for your kitchen. You want to choose the biggest one possible for the space.**

**Think about what you have done:**

What skills have you used?

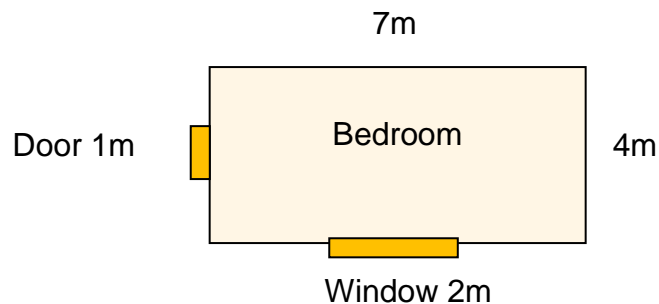
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**Now try this:**

You want to put a border all around your bedroom (as shown, not to scale). The border should not cover the door or the window.

**What is the total length that you will need?**



The border comes in 10m rolls. **How many rolls will you need?**