**PROPORTIONS – PRACTICE QUESTIONS**

1.

Amy is making cupcakes. She reads the instructions.

| Ingredients |
| --- |
| To make 5 cupcakes:<br>200g flour<br>250g sugar<br>220g butter |

Amy wants to make 15 cupcakes.
Work out how much flour, sugar and butter she needs.

$$\text{Flour} = 200 \times 3 = 600g$$

$$\text{Sugar} = 250 \times 3 = 750g$$

$$\text{Butter} = 220 \times 3 = 660g$$

2.

Ben is making chicken fajitas. He reads the instructions.

| Ingredients |
| --- |
| Serves 2:<br>300g chicken<br>3 onions<br>2 peppers<br>75g fajita mix |

Ben wants to make enough to serve 12 people.
Work out how much Ben needs of each ingredient.

$$\text{Chicken} = 300 \times 6 = 1800g$$

$$\text{Onions} = 3 \times 6 = 18$$

$$\text{Peppers} = 2 \times 6 = 12$$

$$\text{Fajita mix} = 75 \times 6 = 450g$$

3.

Cerys is making shortbread biscuits. She reads the instructions.

> **Ingredients**
>
> To make 10 biscuits:
> 400g sugar
> 250g flour
> 350g butter

Cerys wants to make 25 shortbread biscuits.
Work out how much she needs of each ingredient.

Sugar = 400 ÷ 5 = 80 × 2 = 160 g

Flour = 250 ÷ 5 = 50 × 2 = 100 g

Butter = 350 ÷ 5 = 70 × 2 = 140 g

4.

Dean is making macaroni cheese. He reads the instructions.

> **Ingredients**
>
> Serves 2:
> 150g pasta
> 220ml cream
> 120g grated cheese

Dean is making the meal for 5 people.
Work out how much he needs of each ingredient.

Pasta = 150 ÷ 2 = 75 × 5 = 375 g

Cream = 220 ÷ 2 = 110 × 5 = 550 g

Cheese = 120 ÷ 2 = 60 × 5 = 300 g

5.

Erin is making chocolate brownies. She reads the instructions.

| Ingredients |
| --- |
| To make 20 brownies:<br>200g sugar<br>160g flour<br>350g butter<br>150g cocoa powder |

Erin wants to make 70 brownies. Work out how much she needs of each ingredient.

$$Sugar = 200 \div 2 = 100 \times 7 = 700g$$
$$Flour = 160 \div 2 = 80 \times 7 = 560g$$
$$Butter = 350 \div 2 = 175 \times 7 = 1225g$$
$$Cocoa = 150 \div 2 = 75 \times 7 = 525g$$

6.

Felicity is making chilli con carne. She reads the instructions.

| Ingredients |
| --- |
| Serves 2:<br>250g beef mince<br>4 onions<br>320g kidney beans<br>120g chilli powder |

Felicity needs to make enough to serve 11 people.
Work out how much she needs of each ingredient.

$$Beef = 250 \div 2 = 125 \times 11 = 1375g$$
$$Onions = 4 \div 2 = 2 \times 11 = 22$$
$$Kidney\ beans = 320 \div 2 = 160 \times 11 = 1760g$$
$$Chilli\ powder = 120 \div 2 = 60 \times 11 = 660g$$

7.

Frankie, Greg and Hugo are making cakes. They read the instructions.

**Ingredients**

To make 1 cake:
250g sugar
325g flour
300g butter
3 eggs

(a) Frankie has 15 eggs. What is the maximum number of cakes she can make with 15 eggs?

$15 \div 3 = 5$ cakes

(b) Greg has 2 kilograms of sugar. What is the maximum number of cakes he can make with that much sugar?

$2000 \div 250 = 8$ cakes

(c) Hugo has 2.4 kilograms of butter and 3 kilograms of flour. What is the maximum number of cakes he can make with the flour and butter he has?

Butter: $2400 \div 300 = 8$

Flour: $3000 \div 325 = 9.23...$

8 cakes

8.

Jamie is making shortbread biscuits. He reads the instructions.

**Ingredients**

To make 10 biscuits:
300g butter
225g sugar
200g flour

Jamie has 1.8 kilograms of butter, 1.75 kilograms of sugar and 2 kilograms of flour. What is the maximum number of biscuits he can make?

Butter: $1800 \div 300 = 6$

Sugar: $1750 \div 225 = 7.7$

Flour: $2000 \div 200 = 10$

$6 \times 10 = 60$ biscuits

9.
Kirsty is making apple cake. She reads the instructions.

| **Ingredients** |
| --- |
| Serves 2:<br>5 apples<br>300g sugar<br>450g flour<br>350g butter |

Kirsty has 15 apples, 1 kilogram of sugar, 2.5 kilograms of flour and 1.5 kilograms of butter.
What is the maximum number of people Kirsty can serve?

Apples : $15 \div 5 = 3$

Sugar : $1000 \div 300 = 3.3$

Flour : $2500 \div 450 = 5.5$

Butter : $1500 \div 350 = 4.28...$

$3 \times 2 = \underline{6 \text{ people}}$

10.
Lucas is making flapjacks. He reads the instructions.

| **Ingredients** |
| --- |
| To make 12 flapjacks:<br>200g oats<br>120g butter<br>160g sugar<br>20ml golden syrup |

Lucas has 650g of oats, 600g of butter, 575g of sugar and 200ml of golden syrup.
What is the maximum number of flapjacks Lucas can make?

Oats : $650 \div 200 = 3.25$

Butter : $600 \div 120 = 5$

Sugar : $575 \div 160 = 3.59...$

Syrup : $200 \div 20 = 10$

$3.25 \times 12$

$= \underline{39 \text{ Flapjacks}}$

11.
Margaret is making blueberry muffins. She reads the instructions.

| Ingredients |
| --- |
| To make 8 muffins:<br>240g sugar<br>320g flour<br>80g blueberries<br>4 eggs |

Margaret has 800g of sugar, 1 kilogram of flour, 220g of blueberries and 16 eggs.
What is the maximum number of blueberry muffins Margaret can make?

Sugar: $800 \div 240 = 3.3$

Flour: $1000 \div 320 = 3.125$

Blueberries: $220 \div 80 = 2.75$

Eggs: $16 \div 4 = 4$

$2.75 \times 8 =$

22 blueberry muffins

12.
Dawn is making fruit punch for a party.
She reads on the internet that to make 1 litre of fruit punch you need 100ml of pineapple juice, 350ml of orange juice and 550ml of lemonade.

Dawn wants to make 15 litres of fruit punch.

Cartons of pineapple juice contain 250ml and cost £1.20.
Cartons of orange juice contain 250ml and cost £1.
Bottles of lemonade contain 750ml and cost £2.

Work out how much it will cost Dawn to make the fruit punch.

Pineapple: $100 \times 15 = 1500$ ml

Orange: $350 \times 15 = 5250$ ml

Lemonade: $550 \times 15 = 8250$ ml

$1500 \div 250 = 6 \times £1.20 = £7.20$

$5250 \div 250 = 21 \times £1.20 = £25.20$

$8250 \div 750 = 11 \times £1.20 = £13.20$

$7.20 + 25.20 + 13.20 = \underline{£45.60}$