Exam Style Questions

Proportion: Recipes

Corbettmaths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser
You may use tracing paper if needed

Guidance

1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Revision for this topic

www.corbettmaths.com/contents

Video 256

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1. Omar is making Shortbread for 16 people. He has found this recipe on a website.

```
Shortbread
Serves 8

Butter: 150g
Caster Sugar: 75g
Plain Flour: 175g
Cornflour: 50g
```

How much of each ingredient will he need for 16 people?

\[ \times 2 \]

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butter</td>
<td>300g</td>
</tr>
<tr>
<td>Caster Sugar</td>
<td>150g</td>
</tr>
<tr>
<td>Plain Flour</td>
<td>350g</td>
</tr>
<tr>
<td>Cornflour</td>
<td>100g</td>
</tr>
</tbody>
</table>
Here is a recipe for Scones.

**Scones**

**Serves 8**

- Butter: 60g
- Flour: 260g
- Baking Powder: 2 teaspoons
- Buttermilk: 180ml

How much of each ingredient would be needed to make scones for 2 people?

\[ \frac{1}{4} \]

- Butter: \[ \frac{1}{2} \] g
- Flour: \[ \frac{65}{100} \] g
- Baking Powder: \( \frac{1}{2} \) teaspoons
- Buttermilk: \( \frac{45}{100} \) ml

(3)
3. Shown below is a recipe for Stuffed Turkey.

**Stuffed Turkey**

*Serves 4*

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>500g</td>
<td>( \times 2.5 )</td>
</tr>
<tr>
<td>Red Onion</td>
<td>1</td>
<td>( \times 2.5 )</td>
</tr>
<tr>
<td>Garlic Cloves</td>
<td>2</td>
<td>( \times 2.5 )</td>
</tr>
<tr>
<td>Chestnut Mushrooms</td>
<td>150g</td>
<td>( \times 2.5 )</td>
</tr>
<tr>
<td>Spinach</td>
<td>140g</td>
<td>( \times 2.5 )</td>
</tr>
<tr>
<td>Chicken Stock</td>
<td>300ml</td>
<td>( \times 2.5 )</td>
</tr>
</tbody>
</table>

Mary wants to make Stuffed Turkey for 10 people. How much of each ingredient is needed? Include units.

<table>
<thead>
<tr>
<th>Serves 10</th>
<th>Serves 2</th>
<th>( \frac{10}{2} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000g</td>
<td>250g</td>
<td>1250g</td>
</tr>
<tr>
<td>2</td>
<td>( \frac{1}{2} )</td>
<td>2( \frac{1}{2} )</td>
</tr>
<tr>
<td>360g</td>
<td>75g</td>
<td>375g</td>
</tr>
<tr>
<td>260g</td>
<td>75g</td>
<td>350g</td>
</tr>
<tr>
<td>660ml</td>
<td>150ml</td>
<td>750ml</td>
</tr>
</tbody>
</table>

Turkey: 1.25kg

Red Onions: 2\( \frac{1}{2} \)g

Garlic Cloves: 5

Chestnut Mushrooms: 375g

Spinach: 350g

Chicken Stock: 750ml

(5)

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4. Richard wants to make Shortbread for 3 people. He has this recipe.

**Shortbread**

Serves 4  \( \div 4 \times 3 \)

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Serves 1</th>
<th>Serves 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butter</td>
<td>80g</td>
<td>( \frac{80g}{4} \times 3 = 60g )</td>
<td>( \frac{80g}{4} \times 3 = 60g )</td>
</tr>
<tr>
<td>Caster Sugar</td>
<td>60g</td>
<td>( \frac{60g}{4} \times 3 = 45g )</td>
<td>( \frac{60g}{4} \times 3 = 45g )</td>
</tr>
<tr>
<td>Plain Flour</td>
<td>100g</td>
<td>( \frac{100g}{4} \times 3 = 75g )</td>
<td>( \frac{100g}{4} \times 3 = 75g )</td>
</tr>
<tr>
<td>Cornflour</td>
<td>40g</td>
<td>( \frac{40g}{4} \times 3 = 30g )</td>
<td>( \frac{40g}{4} \times 3 = 30g )</td>
</tr>
</tbody>
</table>

How much of each ingredient will Richard need for 3 people?

<table>
<thead>
<tr>
<th>Serves 2</th>
<th>Serves 1</th>
<th>Serves 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>20</td>
<td>60</td>
</tr>
<tr>
<td>30</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>50</td>
<td>25</td>
<td>75</td>
</tr>
<tr>
<td>20</td>
<td>10</td>
<td>30</td>
</tr>
</tbody>
</table>

Butter: ............................g
Caster Sugar: ..........................g
Plain Flour: ..........................g
Cornflour: ..........................g

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5. Donna uses this recipe for Chilli Con Carne.

Serves 6 people
1 kilogram of mince
400 grams of tomatoes
3 chillies
600 grams of kidney beans

Donna is going to use this recipe to make Chilli Con Carne for 15 people.

(a) Work out how many grams of mince she needs.

\[
\frac{1000}{6} \times 15
\]

\[
166.6 \times 15 = 2500 \\
\text{2500 g}
\]

(b) How many people is Shane making Chilli Con Carne for?

\[
1200 \div 400 = 3
\]

\[
3 \times 6 = 18 \\
\text{18 people}
\]
6. Thomas has a recipe for making Rice Krispie cakes. The recipe uses 120g of chocolate and 80g of Rice Krispies to make 12 cakes.

(a) How much chocolate should Thomas use to make 30 cakes?

\[
\frac{120g}{12} \times 30 = 300g
\]

(b) What is 120g out of 200g expressed as a percentage?

\[
\frac{120}{200} = \frac{60}{100}
\]

\[
60\%
\]
7. Jo has a recipe for Bolognese Sauce,

**Bolognese Sauce**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minced Beef</td>
<td>500 g</td>
</tr>
<tr>
<td>Chopped Tomatoes</td>
<td>750 g</td>
</tr>
<tr>
<td>Mushrooms</td>
<td>40 g</td>
</tr>
<tr>
<td>Chicken Stock</td>
<td>150 ml</td>
</tr>
</tbody>
</table>

She only has 400g of minced beef. \( \div 5 \times 4 \)

How much of the other ingredients should she use?

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chopped Tomatoes</td>
<td>( \frac{750}{5} \times 4 = 600 ) g</td>
</tr>
<tr>
<td>Mushrooms</td>
<td>( \frac{40}{5} \times 4 = 32 ) g</td>
</tr>
<tr>
<td>Chicken Stock</td>
<td>( \frac{150}{5} \times 4 = 120 ) g</td>
</tr>
</tbody>
</table>

Chopped Tomatoes: \( \frac{600}{5} \times 4 \) g

Mushrooms: \( \frac{32}{5} \times 4 \) g

Chicken Stock: \( \frac{120}{5} \times 4 \) g

(3)
8. The table shows information about the protein content of yoghurt bars.

<table>
<thead>
<tr>
<th></th>
<th>per 100g</th>
<th>per bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein</td>
<td>5.75g</td>
<td>2.3g</td>
</tr>
</tbody>
</table>

The yoghurt bars are sold in 520g packs.

(a) Work out how many bars there are in a pack.

\[
5.75 \div 2.3 = 2.5
\]

\[
100 \div 2.5 = 40 \text{g per bar}
\]

\[
520 \div 40 = 13 \text{ bars}
\]

(b) Complete the table for the snack size biscuits.

<table>
<thead>
<tr>
<th></th>
<th>per 100g</th>
<th>per snack size bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein</td>
<td>5.75g</td>
<td>1.61g</td>
</tr>
</tbody>
</table>

\[
140 \div 5 = 28 \text{g per bar}
\]

\[
5.75\% \text{ protein}
\]

\[
28 \times 0.0575
\]

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