1. **Work out.**

<table>
<thead>
<tr>
<th>a. $435 + \underline{_____} = 1000$</th>
<th>b. $412 - 231 = \underline{_____}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c. $14 \times 20 = \underline{_____}$</th>
<th>d. $336 \div 24 = \underline{_____}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Write numbers in each circle to make each line add up to **150**.

```
79  34

26  18
```
3. Look at the shape below.
   Work out the **area** of the shaded part.

4. There are **108 people** on a plane.
   Half are men.
   A quarter are women.
   The rest are children.

   **How many children** are on the plane?
5. Keith finds these coins in his money box.

<table>
<thead>
<tr>
<th>Coin</th>
<th>2c</th>
<th>5c</th>
<th>20c</th>
<th>€1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Coins</td>
<td>10</td>
<td>4</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>

a. Work out the total amount of money that Keith has.

You can show your working here.

€ _____ · _____

b. Keith wants to buy a book that costs €10·50.

How much more money does he need to save?

You can show your working here.

€ _____ · _____
6. The table below shows the plants sold by 3 children during a fair.

<table>
<thead>
<tr>
<th>Name</th>
<th>Number of plants sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petra</td>
<td>42</td>
</tr>
<tr>
<td>Amanda</td>
<td>31</td>
</tr>
<tr>
<td>Isaac</td>
<td>38</td>
</tr>
</tbody>
</table>

a. Work out the average number of plants sold.

b. Their teacher sold another 57 plants during this fair.
   How many plants did they sell in all?
7. Look at the cards below.
Choose the correct cards to complete the table.

**Note:** There are some extra cards.

- $\frac{1}{4}$
- 0.04
- 50%
- $\frac{3}{4}$
- 0.5
- $\frac{1}{5}$
- $\frac{4}{100}$
- 25%
- 0.25
- 4%
- 20%
- 0.2
- 0.75
- 0.4
- 75%
- $\frac{1}{2}$
- 30%
- 1.4

<table>
<thead>
<tr>
<th>decimal numbers</th>
<th>fractions</th>
<th>percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 0.5</td>
<td>=</td>
<td>=</td>
</tr>
<tr>
<td>b.</td>
<td>=</td>
<td>= 20%</td>
</tr>
<tr>
<td>c.</td>
<td>=</td>
<td>= 75%</td>
</tr>
<tr>
<td>d.</td>
<td>= $\frac{1}{4}$</td>
<td>=</td>
</tr>
<tr>
<td>e. 0.04</td>
<td>=</td>
<td>=</td>
</tr>
</tbody>
</table>
8. Look at the recipe below which makes **10 muffins**.

Anton, Mary and Lisa make muffins using this recipe.

![Muffins](image)

<table>
<thead>
<tr>
<th>Chocolate Muffins Recipe</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 g flour</td>
</tr>
<tr>
<td>180 g butter</td>
</tr>
<tr>
<td>150 g sugar</td>
</tr>
<tr>
<td>2 eggs</td>
</tr>
<tr>
<td>2 tablespoons chocolate powder</td>
</tr>
</tbody>
</table>

a. Anton makes **25 chocolate muffins**.

**How many kilograms** of flour does he use?

You can show your working here.

_______ kilograms

b. How many muffins does Mary make with **7 eggs**?

You can show your working here.

_______ muffins

c. Lisa uses **75 grams of sugar**.

**How much butter** does she use?

Give your answer in **grams**.

You can show your working here.

_______ grams
9a. On the grid below, use a ruler to **draw a shape** that has a **vertical line of symmetry** and a **horizontal line of symmetry**.

![Grid with lines of symmetry](image)

b. The triangle below is an **isosceles triangle**. Side PQ and side PR are of the **same length**. **Work out** the size of **angle a**.

![Isosceles triangle with angle a](image)
10. The following is the amount of water 4 children drink in one day.

<table>
<thead>
<tr>
<th>BOYS</th>
<th>GIRLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOM</td>
<td>BRIAN</td>
</tr>
<tr>
<td>150 ml</td>
<td>1·05 l</td>
</tr>
<tr>
<td></td>
<td>SILVIA</td>
</tr>
<tr>
<td>1 l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LORNA</td>
</tr>
<tr>
<td></td>
<td>3 ( \frac{3}{4} ) l</td>
</tr>
</tbody>
</table>

a. Who drinks the largest amount of water? [___________]

b. Lorna wants to drink as much as Silvia. How much more does Lorna need to drink? Give your answer in ml.

You can show your working here.
[___________ ml]

c. How much water do the boys drink in total? Give your answer in ml.

You can show your working here.
[___________ ml]

d. Brian says that the boys drink more water than the girls.
 i. Is he right? Tick (✓) the correct answer. Yes [ ] No [ ]

ii. Give a reason for your answer. _______________________________
11. The timeline below shows the daily opening hours of a shop.

<table>
<thead>
<tr>
<th>Open</th>
<th>Closed for Break</th>
<th>Open</th>
<th>Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 am</td>
<td>11:30 am</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. At what time does the shop close for break? ____ : _____

b. How long does the shop stay open during the day? Give your answer in hours and minutes.

[Space for working]

You can show your working here.

_____ hours _____ minutes

c. **Underline** the correct answer.

The shop closes at (quarter to seven, quarter past seven, half past seven) in the evening.

d. How long does the shop stay open from Monday to Friday? Give your answer in hours and minutes.

[Space for working]

You can show your working here.

_____ hours _____ minutes
12. Fill in the boxes below with these cards.

[×  ÷  +  −]

**Note:** Each card can be used more than once.

a. 245 [ ] 512 = 757

b. 4 kg [ ] 2 kg 525 g = 1 kg 475 g

c. 2·5 litres [ ] 450 ml = 2·05 litres

d. 2·05 [ ] 5 = 0·41

e. 0·2 [ ] 5 = 1

You can show your working here.
13. The bar chart below shows the hair colour of a group of women who take part in a survey.

![Bar chart showing hair colour frequencies]

a. Which is the **most common** hair colour? 

b. How many women have red hair? 

_________ women

c. **How many women, in total**, take part in the survey?

You can show your working here.

_________ women

d. For taking part in the survey, each woman receives a hairband. Each hairband costs **50cent**.

What is the **total cost** of the hairbands?

You can show your working here.

€ ______ :_______
14. There is 500 g of **coffee** in a container.

A shopkeeper then pours 5 bags of **coffee**, each weighing 1.7 kg into the container.

a. What is the **new weight of the coffee** in the container? Give your answer in **grams**.

You can show your working here.

_________ grams

b. He then packs the coffee into packets.

i. Each packet contains **250 grams**.

   How many packets does he pack?

You can show your working here.

_________ packets

ii. The shopkeeper sells each packet at **€3**.

   How much does the shopkeeper get after selling all the packets?

You can show your working here.

€_____ · _____
15. The diagram below is made up of a rectangle and four equal squares. 

The breadth of the rectangle is \( \frac{1}{4} \) that of its length.

![Diagram of a rectangle and four equal squares](image)

15 cm

a. Work out the length of the rectangle.

You can show your working here.

\[ \text{___________ cm} \]

b. Work out the perimeter of the rectangle.

You can show your working here.

\[ \text{___________ cm} \]

c. The total area of the four squares is 144 cm\(^2\).

What is the length of each side of the squares?

You can show your working here.

\[ \text{___________ cm} \]
16. Jade has a pack of cards numbered 1 to 20.

- Jade chooses five different number cards.
- Two of the five numbers are square numbers.
- Two of the five numbers are multiples of seven.
- Four out of the five numbers are even.
- The sum of the five numbers is less than 45.

Which 5 number cards does Jade choose?

You can show your working here.

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END OF PAPER

<table>
<thead>
<tr>
<th>Marks Scheme</th>
<th>Nos.</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Paper</td>
<td>1 - 20</td>
<td>20 × 1 mark = 20 marks</td>
</tr>
<tr>
<td>Written Paper</td>
<td>1 - 4</td>
<td>4 × 4 marks = 16 marks</td>
</tr>
<tr>
<td></td>
<td>5 - 12</td>
<td>8 × 5 marks = 40 marks</td>
</tr>
<tr>
<td></td>
<td>13 - 16</td>
<td>4 × 6 marks = 24 marks</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>100 marks</td>
</tr>
</tbody>
</table>

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