1. Work out.

<table>
<thead>
<tr>
<th>a) (325 + 75 = )</th>
<th>b) (3258 - 137 = )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c) (23 \times 40 = )</th>
<th>d) (414 \div 18 = )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(4 marks)

2. Continue these sequences.

| a) 1, 3, [ ] , [ ] , 9, 11, [ ] |
|---------------------|---------------------|
|                     |                     |

| b) 5, 5·25, [ ] , [ ] , [ ] , 6·25, 6·5 |
|---------------------|---------------------|
|                     |                     |

| c) 1, 2, 4, 8, 16, [ ] , [ ] , [ ] , 256, 512 |
|---------------------|---------------------|
|                     |                     |

| d) 1, 3, 6, 10, 15, [ ] , [ ] , [ ] , 45, 55 |
|---------------------|---------------------|
|                     |                     |

(4 marks)
3. There are **six numbers** below. Write them in the **correct place** on the Carroll diagram.

\[
\begin{array}{cccccc}
12 & 20 & 43 & 48 & 50 & 57 \\
\end{array}
\]

<table>
<thead>
<tr>
<th>divisible by 3</th>
<th>not divisible by 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>a multiple of 4</td>
<td>not a multiple of 4</td>
</tr>
</tbody>
</table>

(4 marks)

4. The number pyramid below is incomplete. Complete the number pyramid.

**Hint:** The number in each rectangle is the sum of the two numbers in the rectangles below it.

\[
\begin{array}{cccc}
920 & 300 \\
421 & 101 \\
312 & 109 & 90 & 11 \\
288 & 85 & 6 \\
\end{array}
\]

(4 marks)
5. Look at these triangles.

\[ \text{A} \quad \text{B} \quad \text{C} \quad \text{D} \]

a) Which triangle:

i) has 1 right angle? __________

ii) is an equilateral triangle? __________

iii) has only 1 line of symmetry? __________

b) Tick (✓) the correct answer.

Triangle C is:

- [ ] scalene
- [ ] equilateral
- [ ] isosceles
- [ ] right-angled

5 marks)

c) Which triangle can be used twice to make a rectangle?

triangle __________

(5 marks)
6. Peter uses five letters A, B, C, D and E to make a pattern. Below are the first 12 letters in the pattern.

\[ \text{A - B - C - D - E - A - B - C - D - E - A - B...} \]

1\(^{st}\) 12\(^{th}\)

a) Which letter is in the 17\(^{th}\) position?

b) In which position is the 4\(^{th}\) letter A?

c) Which letter is in the 99\(^{th}\) position?

(5 marks)

7. Put in the correct sign <, > or =

a) \( \frac{3}{4} \quad 0.75 \)

d) 20\% \quad 0.2

b) \( 1\frac{4}{7} \quad \frac{14}{7} \)

e) \( \frac{6}{8} \quad 75\% \)

c) \( \frac{3}{5} \quad 6\% \)

(5 marks)
8. Look at the map.

A, B, C, D, E, F, G and H are different rides at the Fun Park.

a) Fill in with directions.

F is \hspace{2cm} of H.

b) Fill in with A, B, C, D, E, F, G or H.

i) \hspace{2cm} is South East of B.

ii) \hspace{2cm} is West of \hspace{2cm}.

c) Andrea is on ride G.

She turns 225° clockwise to look at ride H.

Which ride was she looking at before she made the turn?

(5 marks)
9a) Look at these scales.

On the scales there is a weight of 750 g and five bags of equal mass (weight).

Work out the mass of 1 bag.
Give your answer in grams.

Show your working here.

grams

9b) Tick (✓) the best estimate for the mass of:

i) 6 apples

0.06 kg

1 kg

7.5 kg

65 g

ii) a 10 year old child

3 kg

30 kg

850 kg

2500 g

(5 marks)
10. Look at the prices of these items.

![Images of book, bag, pencil case, lunch box]

book €12.50  bag €26.25  pencil case €8.75  lunch box €6.25

a) The **bag** costs **3 times more** than the __________________.

b) I buy **two** items. I spend €32.50.
   The first item I buy is the **bag**. What is the **other** item?

   ![Show your working here]

   (5 marks)

(c) How much do **14 pencil cases** cost altogether?

   ![Show your working here]

   €

   (5 marks)
11a) Peter joins **square A** and **rectangle B** to form the new shape below.

![Shape Diagram](not the actual size)

b) Now, Peter adds **square C** to the shape above. Work out the **new total area**.

---

**Question 11a**: 

i) Work out the **total perimeter** of the shape above.

Show your working here. 

\[ \text{cm} \]

ii) Work out the **area** of the shape above.

Show your working here. 

\[ \text{cm}^2 \]

---

**Question 11b**: 

Now, Peter adds **square C** to the shape above. Work out the **new total area**.

Show your working here. 

\[ \text{cm}^2 \]

(5 marks)
12. **Five students** get the following marks in an English test at school.

<table>
<thead>
<tr>
<th></th>
<th>Daniel</th>
<th>Sara</th>
<th>Manwel</th>
<th>Robert</th>
<th>Pamela</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark</td>
<td>85</td>
<td>60</td>
<td>88</td>
<td>75</td>
<td>67</td>
</tr>
</tbody>
</table>

a) Work out the mean mark for the English test for these five students.

Show your working here.

b) The table below shows the marks the same students get in a second English test.

Some marks are missing.

- In the second test, **Daniel’s mark decreases by 12**.
- The **new mean** mark is **80**.

**Complete** the following table to show the **new marks**.

<table>
<thead>
<tr>
<th></th>
<th>Daniel</th>
<th>Sara</th>
<th>Manwel</th>
<th>Robert</th>
<th>Pamela</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark</td>
<td>78</td>
<td></td>
<td>82</td>
<td></td>
<td>70</td>
</tr>
</tbody>
</table>

Show your working here.

(5 marks)
13a) This diagram shows how Paul spends a full day during the week. He spends one third of the day sleeping.

\[ \text{sleeping} \quad \frac{1}{3} \quad \text{school, homework and reading} \quad \text{sports} \quad \text{travelling} \quad \text{personal care and free time} \]

i) How many hours does Paul spend sleeping?

ii) How many minutes does Paul spend doing sports?

iii) Tick (✓) the correct answer.
    Paul spends exactly 240 minutes:
    \[ \square \quad \text{sleeping} \quad \square \quad \text{on personal care and free time} \quad \square \quad \text{at school} \]

b) Paul has a swimming lesson on Saturdays.
    It starts at 09:15 and lasts 1 \(\frac{1}{4}\) hours.
    At what time does the swimming lesson finish?

Show your working here.

(6 marks)
14. The bar graph below shows the **favourite fruits** of **40 children**.

![Bar Graph](image)

**Number of Fruit**

<table>
<thead>
<tr>
<th>Fruits</th>
<th>Favourite Fruits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples</td>
<td></td>
</tr>
<tr>
<td>Bananas</td>
<td></td>
</tr>
<tr>
<td>Oranges</td>
<td></td>
</tr>
<tr>
<td>Kiwi</td>
<td></td>
</tr>
<tr>
<td>Grapes</td>
<td></td>
</tr>
</tbody>
</table>

**Fruits**

a) Fill in all the **missing information** about the **number of fruit** on the graph.

b) More children prefer **oranges** to **kiwi**.  
   Work out the **difference**.

<table>
<thead>
<tr>
<th>children</th>
</tr>
</thead>
</table>

**c) i) Express the number of children who prefer **bananas** as a fraction of the total number of children.**
   Give your answer in its **lowest terms**.

<table>
<thead>
<tr>
<th>fraction</th>
</tr>
</thead>
</table>

   **ii) What percentage of the children prefer **bananas**?**

<table>
<thead>
<tr>
<th>%</th>
</tr>
</thead>
</table>

(6 marks)
15a) The table below shows the amount of water a person should drink every day according to their mass (weight).

<table>
<thead>
<tr>
<th>Mass (in kg)</th>
<th>Water (in litres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>1.9</td>
</tr>
<tr>
<td>50</td>
<td>2.1</td>
</tr>
<tr>
<td>55</td>
<td>2.3</td>
</tr>
<tr>
<td>60</td>
<td>2.5</td>
</tr>
<tr>
<td>65</td>
<td>2.7</td>
</tr>
<tr>
<td>70</td>
<td>2.9</td>
</tr>
<tr>
<td>75</td>
<td>3.1</td>
</tr>
</tbody>
</table>

i) Claude weighs 85 kg.
According to the table above, how many litres of water should he drink?

ii) Julia weighs 60 kg.
How many 200 ml glasses of water does she need to drink every day?
Tick (✓) the best estimate.

5 glasses  [ ]  15 glasses  [ ]  25 glasses  [ ]

b) At a Sports Day, there are 300 children.
They drink one 500 ml bottle of water each.
How many litres of water do they drink altogether?

Show your working here.

(6 marks)
16. Clyde, Petra and Maria buy some items from the shop Kids’ Accessories.

<table>
<thead>
<tr>
<th></th>
<th>Clyde buys</th>
<th>Clyde spends</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 pairs of shoes and 1 bag</td>
<td></td>
<td>€50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petra buys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 pair of shoes and 1 winter set</td>
<td></td>
<td>€22.90</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maria buys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 bag and 1 winter set</td>
<td></td>
<td>€27.90</td>
</tr>
</tbody>
</table>

a) What is the **total cost** of 1 pair of shoes, 1 bag and 2 winter sets?

Show your working here.

€

b) What is the **cost** of 1 pair of shoes?

Show your working here.

€

(6 marks)