Change the quantities.

a) \(3 \text{ cl} = \boxed{30} \text{ ml}\)
b) \(40 \text{ ml} = \boxed{4} \text{ cl}\)

\[7 \text{ cl} = \boxed{70} \text{ ml}\]
\[320 \text{ ml} = \boxed{32} \text{ cl}\]

\[12 \text{ cl} = \boxed{120} \text{ ml}\]
\[400 \text{ ml} = \boxed{40} \text{ cl}\]

\[20 \text{ cl} = \boxed{200} \text{ ml}\]
\[1000 \text{ ml} = \boxed{100} \text{ cl}\]

\[105 \text{ cl} = \boxed{1050} \text{ ml}\]
\[1540 \text{ ml} = \boxed{154} \text{ cl}\]

Follow the example. Fill in the missing quantities.

a) \(45 \text{ ml} = \boxed{4} \text{ cl} \boxed{5} \text{ ml}\)
b) \(1009 \text{ ml} = \boxed{100} \text{ cl} \boxed{9} \text{ ml}\)

\[145 \text{ ml} = \boxed{14} \text{ cl} \boxed{5} \text{ ml}\]
\[1209 \text{ ml} = \boxed{120} \text{ cl} \boxed{9} \text{ ml}\]

\[76 \text{ ml} = \boxed{7} \text{ cl} \boxed{6} \text{ ml}\]
\[1054 \text{ ml} = \boxed{105} \text{ cl} \boxed{4} \text{ ml}\]

\[376 \text{ ml} = \boxed{37} \text{ cl} \boxed{6} \text{ ml}\]
\[1230 \text{ ml} = \boxed{123} \text{ cl} \boxed{0} \text{ ml}\]

\[999 \text{ ml} = \boxed{99} \text{ cl} \boxed{9} \text{ ml}\]
\[1999 \text{ ml} = \boxed{199} \text{ cl} \boxed{9} \text{ ml}\]

An adult needs about 2 litres of water per day. Half of this amount is contained in food and other liquids.

a) If a man drinks the same amount of water 4 times per day to make up the extra, how much water should he drink each time?

Half of 2 litres: \(\boxed{1} \text{ litre}\)

Litres remaining: \(\boxed{1} \text{ litre}\)

Amount in each drink: \(\boxed{25} \text{ cl}\)

b) How much water should he drink each time if he drinks 5 times per day?

\(\boxed{1} \text{ litre} \div 5 = 100 \text{ cl} \div 5 = 20 \text{ cl}\)

\(\boxed{2} \text{ litre} \div 5 = 400 \text{ cl} \div 5 = 80 \text{ cl}\)

Sue and Jane share 2 litres of orange juice between them. Complete the table.

\[
\begin{array}{|c|c|c|c|c|c|c|c|}
\hline
S & \text{1 litre} & \frac{1}{2} \text{ litre} & 130 \text{ cl} & 70 \text{ ml} & 1170 \text{ ml} & 115 \text{ cl} & 600 \text{ ml} & 0 \text{ cl} \\
\hline
J & \text{1 litre} & 1 \frac{1}{2} \text{ litres} & 70 \text{ cl} & 1930 \text{ ml} & 830 \text{ ml} & 85 \text{ cl} & 1400 \text{ ml} & 200 \text{ cl} \\
\hline
\end{array}
\]

Rule: \(S = 2 - J\) \hspace{1cm} \(J = 2 - S\) \hspace{1cm} \(S + J = 2\)
This baby's bottle has marks at every 10 ml up to 250 ml.

a) How many marks are on the bottle? 25

b) How much milk will be in the bottle if it is level with:
   i) the 5th mark
   ii) the 7th mark
   iii) the 10th mark
   iv) the 20th mark?

How many 5 cl glasses of water would it take to fill up this measuring jug to:

a) the 1st mark
b) the 2nd mark
c) the 3rd mark
d) the 4th mark?

Complete the table.

<table>
<thead>
<tr>
<th>ml</th>
<th>1200</th>
<th>2000</th>
<th>800</th>
<th>1230</th>
<th>1500</th>
<th>1900</th>
<th>1850</th>
</tr>
</thead>
<tbody>
<tr>
<td>cl</td>
<td>120</td>
<td>200</td>
<td>80</td>
<td>123</td>
<td>150</td>
<td>190</td>
<td>185</td>
</tr>
<tr>
<td>10 cl</td>
<td>12</td>
<td>20</td>
<td>8</td>
<td>12 cl 3 ml</td>
<td>15</td>
<td>19</td>
<td>18 cl 5 ml</td>
</tr>
<tr>
<td>litres</td>
<td>1 and 2 tenths</td>
<td>2</td>
<td>8 tenths</td>
<td>1 and 23 hundredths</td>
<td>1 and 5 tenths</td>
<td>1 and 9 tenths</td>
<td>1 and 85 hundredths</td>
</tr>
</tbody>
</table>

Elephant drank 4 more litres of water than Rhino. Complete the table.

<table>
<thead>
<tr>
<th>Elephant</th>
<th>35 litres</th>
<th>51 litres</th>
<th>33 and a half litres</th>
<th>1350 cl</th>
<th>32 litres 20 cl</th>
<th>23 and 3 tenths litres</th>
<th>41.3 litres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhino</td>
<td>31 litres</td>
<td>47 litres</td>
<td>29 and a half litres</td>
<td>950 cl</td>
<td>28 litres 20 cl</td>
<td>19 and 3 tenths litres</td>
<td>37.3 litres</td>
</tr>
</tbody>
</table>

**Rule:**

\[ E = R + 4 \text{ litres} \quad R = E - 4 \text{ litres} \quad 4 \text{ litres} = E - R \]

Write the rule and complete the table. **Rule:** Number \( B \) is number \( A \) rounded to nearest 10.

<table>
<thead>
<tr>
<th>A</th>
<th>36 ml</th>
<th>23 cl</th>
<th>1214 l</th>
<th>141 ml</th>
<th>716 cl</th>
<th>325 l</th>
<th>996 ml</th>
<th>102 cl</th>
<th>450 l</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>40 ml</td>
<td>20 cl</td>
<td>1210 l</td>
<td>140 ml</td>
<td>720 ml</td>
<td>330 l</td>
<td>1000 ml</td>
<td>100 cl</td>
<td>450 l</td>
</tr>
</tbody>
</table>
How much money is in each picture? Write the amount in pence.

1) a) \( \begin{align*}
&\text{£1} \quad \text{10p} \\
&\text{£1} \quad \text{10p} \\
&\text{£1} \quad \text{10p} \\
&\text{£1} \quad \text{10p} \\
&\text{£1} \quad \text{1p} \\
&\text{£1} \quad \text{1p} \\
\end{align*} \)

\[ 452 \text{ p} \]

b) \( \begin{align*}
&\text{£1} \\
&\text{10p} \\
&\text{£1} \\
&\text{1p} \\
&\text{10p} \\
&\text{1p} \\
\end{align*} \)

\[ 1402 \text{ p} \]

c) \( \begin{align*}
&\text{£10} \\
&\text{10p} \\
&\text{£1} \\
&\text{1p} \\
&\text{10p} \\
&\text{1p} \\
\end{align*} \)

\[ 1035 \text{ p} \]

How much money is in each box? Which box in each pair has more? (\(<\), \(\), \(\))

2) a) \( \begin{align*}
&\text{£5} \\
&\text{5p} \\
\end{align*} \)

\[ 706 \text{ p} \]

b) \( \begin{align*}
&\text{£5} \\
&5p \\
&1p \\
\end{align*} \)

\[ 526 \text{ p} \]

c) \( \begin{align*}
&\text{£10} \\
&\text{50p} \\
&\text{1p} \\
\end{align*} \)

\[ 1451 \text{ p} \]

d) \( \begin{align*}
&\text{£10} \\
&2p \\
&5p \\
\end{align*} \)

\[ 1307 \text{ p} \]

Exchange the money for 1p coins.

3) a) \( 8 \text{ 10p} = . .80 . .1p \)

b) \( 8 \text{ £1} = .800 . .1p \)

c) \( 12 \text{ 10p} = .120 . .1p \)

d) \( 12 \text{ £1} = .1200 . .1p \)

Exchange the money for 10p coins.

4) a) \( 60 \text{ 1p} = .60 . .10p \)

b) \( 9 \text{ £1} = .90 . .10p \)

c) \( 180 \text{ 1p} = .18 . .10p \)

d) \( 10 \text{ £1} = .100 . .10p \)

e) \( 900 \text{ 1p} = .90 . .10p \)

f) \( 12 \text{ £1} = .120 . .10p \)

Exchange the money for £1 coins.

5) a) \( 100 \text{ 1p} = .1 . .1£ \)

b) \( 60 \text{ 10p} = .6 . .1£ \)

c) \( 900 \text{ 1p} = .9 . .1£ \)

d) \( 100 \text{ 10p} = .10 . .1£ \)

e) \( 1400 \text{ 1p} = .14 . .1£ \)

f) \( 150 \text{ 10p} = .15 . .1£ \)
Fill in the missing values.

1

a) \[ 200 \ell + 360 \ell + 80 \ell = 560 \ell \]

b) \[ 400 \text{ kg} - 70 \text{ kg} = 320 \text{ kg} - 470 \text{ kg} \]

Fill in the missing quantities to make the equations correct.

2

a) \[ 260 \text{ cm} + 350 \text{ cm} = 360 \text{ cm} + 250 \text{ cm} \]

b) \[ 190 \text{ g} + 470 \text{ g} = 480 \text{ g} + 180 \text{ g} \]

c) \[ 470 \text{ ml} + 280 \text{ ml} = 480 \text{ ml} + 270 \text{ ml} \]

d) \[ 260 \text{ m} + 340 \text{ m} = 431 \text{ m} + 169 \text{ m} \]

e) \[ 750 \ell - 160 \ell = 740 \ell - 150 \ell \]

f) \[ 630 \text{ mm} - 470 \text{ mm} = 640 \text{ mm} - 480 \text{ mm} \]

Bella's piece of ribbon is 800 cm longer than Anne's. What length of ribbon could they each have? Complete the table and write the rule.

3

<table>
<thead>
<tr>
<th>A</th>
<th>100 cm</th>
<th>200 cm</th>
<th>300 cm</th>
<th>600 cm</th>
<th>500 cm</th>
<th>1100 cm</th>
<th>0 cm</th>
<th>1200 cm</th>
<th>700 cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>900 cm</td>
<td>1000 cm</td>
<td>1100 cm</td>
<td>1400 cm</td>
<td>1300 cm</td>
<td>1900 cm</td>
<td>800 cm</td>
<td>2000 cm</td>
<td>1500 cm</td>
</tr>
</tbody>
</table>

Rule: \[ A = B - 800 \text{ cm} \quad B = A + 800 \text{ cm} \quad 800 \text{ cm} = B - A \]

Write the calculations and underline the answer.

4

a) Emma has £700 and Freddy has £500. How much do they have altogether?

Total: \[ £700 + £500 = £1200 \]

b) George has £700. Harry has £500 less than George.

i) How much money does Harry have?

\[ H = £700 - £500 = £200 \]

ii) How much money do they have altogether?

Total: \[ G + H = £700 + £200 = £900 \]
1. Round the amounts in millilitres to the nearest centilitre.

a) 293 ml \( \approx \boxed{29} \) cl  
   295 ml \( \approx \boxed{30} \) cl  
   298 ml \( \approx \boxed{30} \) cl  

b) 994 ml \( \approx \boxed{99} \) cl  
   995 ml \( \approx \boxed{100} \) cl  
   999 ml \( \approx \boxed{100} \) cl  

c) 1004 ml \( \approx \boxed{100} \) cl  
   1005 ml \( \approx \boxed{101} \) cl  
   1006 ml \( \approx \boxed{101} \) cl  

d) 1593 ml \( \approx \boxed{159} \) cl  
   1595 ml \( \approx \boxed{160} \) cl  
   1597 ml \( \approx \boxed{160} \) cl  

2. Colin and Diane have saved £900 altogether. How much money could they each have saved? Complete the table and write the rule.

<table>
<thead>
<tr>
<th>C</th>
<th>£100</th>
<th>£700</th>
<th>£500</th>
<th>£900</th>
<th>£700</th>
<th>£860</th>
<th>£10</th>
<th>£400</th>
<th>£890</th>
<th>£899</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>£800</td>
<td>£200</td>
<td>£400</td>
<td>£0</td>
<td>£200</td>
<td>£40</td>
<td>£890</td>
<td>£500</td>
<td>£10</td>
<td>£1</td>
</tr>
</tbody>
</table>

Rule: \[ C = £900 - D \]
\[ D = £900 - C \]
\[ £900 = C + D \]

3. Write the calculations and underline the answer.

a) Irene has £700 and Joanne has £500. Who has more? How much more?
   \[ £700 - £500 = £200 \]
   Irene has £200 more than Joanne.

b) Dan and Bob have £700 altogether. Dan has £500 more than Bob. How much money does Bob have?
   \[ (£700 - £500) \div 2 = £100 \]
   Bob has £100.

4. Which is more? Fill in the missing signs. Write the greater value in the table.

a) 12 \( \ell \) 25 cl \( \boxed{<} \) 12.5 \( \ell \)
b) £150 24 p \( \boxed{>} \) £15.24
c) 6.59 m \( \boxed{>} \) 655 cm
d) 220 cl \( \boxed{<} \) 2 \( \ell \) 86 cl
e) 4 m 65 cm \( \boxed{>} \) 4.6 m
<table>
<thead>
<tr>
<th></th>
<th></th>
<th>11</th>
<th>20</th>
<th>37</th>
<th>44</th>
<th>59</th>
<th>62</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>73</td>
<td>88</td>
<td>95</td>
<td>100</td>
<td>111</td>
<td>126</td>
</tr>
<tr>
<td></td>
<td></td>
<td>142</td>
<td>157</td>
<td>160</td>
<td>173</td>
<td>184</td>
<td>191</td>
</tr>
</tbody>
</table>

1. a) Circle in red the 3-digit numbers in the 2nd row.
   b) Circle in green the 3-digit even numbers in the 3rd column from the left.
   c) Circle in yellow the 2-digit odd numbers in the 3rd row from the bottom.
   d) Circle in blue the odd numbers in the 6th column from the right.

2. Write additions and subtractions about each picture.
   a) \[363 + 152 = 515\]
   b) \[381 + 133 = 514\]
   c) \[401 + 35 = 436\]

3. Estimate the sums by rounding the numbers to the nearest whole ten.
   a) \[471 + 384 \approx 470 + 380 = 850\]
   b) \[326 + 75 \approx 330 + 80 = 410\]
   c) \[1365 + 524 \approx 1370 + 520 = 1890\]
   d) \[1723 + 255 \approx 1720 + 260 = 1980\]

4. Katy went shopping.
   a) Estimate to the nearest £ how much she spent if she bought:
      i) the pen and the book \[£5 + £3 \approx £8\]
      ii) the purse and the pencils \[£6 + £2 \approx £8\]
   b) Estimate to the nearest 10 p how much she spent if she bought:
      i) the purse and the pen \[£5.70 + £4.60 \approx £10.30\]
      ii) the book and the pencils \[£3.10 + £2.40 \approx £5.50\]
Estimate by using values rounded to the nearest 10 p. Find the exact amount in the picture and compare it with your estimate.

a) Liz had £1 53 p in her piggy bank. She was given another £3 48 p. How much does she have in her piggy bank now?

Had: £1 53 p ≈ £1 50 p

Was given: £3 48 p ≈ £3 50 p

Now has: £5 01 p ≈ £5 00 p

b) Brian has £3 55 p. Carolyn has £1 13 p more than Brian. How much does Carolyn have?

B: £3 55 p ≈ £3 60 p

C: £4 68 p ≈ £4 70 p

£4 68 p < £4 70 p

Estimate each amount to the nearest 10 p, then write down the exact amount.

A: Estimate Exact amount

B: Estimate Exact amount

A + B: Estimate Exact amount

How can the butterfly get to the flower? Calculate the length of possible routes.

5 m 32 cm + 2 m 40 cm = 7 m 72 cm

5 m 32 cm + 111 cm + 2 m 12 cm = 8 m 55 cm

6 m 3 cm + 2 m 12 cm = 8 m 15 cm

6 m 3 cm + 111 cm + 2 m 40 cm = 9 m 54 cm
How much money do the two children have altogether? Complete the drawing, then estimate, calculate and check the answer.

**Alice:**

```
100 100 100 100 100
10 10 10 10 10
```

**Estimation**

```
4 7 0
```

**Sam:**

```
100
10 10
```

**Estimation**

```
2 2 0
```

**Total:**

```
6 9 0
```

How much money do the two children have altogether? Complete the drawing, then estimate, calculate and check the answer.

**Fred:**

```
100
100
10 10
```

**Estimation**

```
5 1 0
```

**Gordon:**

```
100
100
10 10
```

**Estimation**

```
4 5 0
```

**Total:**

```
9 6 0
```

Write the numbers in the place value table. Estimate, then calculate the sum.

**a)**

```
136 + 312
```

**Estimation**

```
4 5 0
```

**b)**

```
271 + 117
```

**Estimation**

```
3 9 0
```

**c)**

```
632 + 324
```

**Estimation**

```
9 5 0
```

**d)**

```
426 + 32
```

**Estimation**

```
4 6 0
```

Estimate, then calculate the sum. Write the estimate in detail.

```
336 + 452
```

**Estimation**

```
3 4 0
```

**Calculation**

```
7 9 0
```

Page 88
Estimate, then calculate the sums. Write the estimates in detail.

a) 642 + 207
   \[ E: \quad 642 + 207 \approx 640 + 210 = 850 \]
   \[ C: \quad +1207 \]
   \[ 849 \]

b) 508 + 161
   \[ E: \quad 508 + 161 \approx 510 + 160 = 670 \]
   \[ C: \quad +161 \]
   \[ 669 \]

c) 397 + 501
   \[ E: \quad 397 + 501 \approx 400 + 500 = 900 \]
   \[ C: \quad +501 \]
   \[ 898 \]

d) 43 + 945
   \[ E: \quad 43 + 945 \approx 40 + 950 = 990 \]
   \[ C: \quad +945 \]
   \[ 988 \]

Calculate the sums. Look at the diagram to see how the numbers change.

a) \[
\begin{array}{c}
3 & 4 & 6 \\
+ & 2 & 1 & 3 \\
\hline
5 & 5 & 9 \\
\end{array}
\]

b) \[
\begin{array}{c}
3 & 4 & 6 \\
+ & 3 & 1 & 3 \\
+ & 6 & 5 & 9 \\
\hline
346 & 313 & 100 \\
\end{array}
\]

c) \[
\begin{array}{c}
3 & 4 & 6 \\
+ & 1 & 1 & 3 \\
\hline
4 & 5 & 9 \\
\end{array}
\]

Find the data and write a plan. Estimate, calculate and check the result. Write the answer in a sentence.

A greengrocer ordered 264 kg of apples and 525 kg of bananas. How many kg of fruit did he order altogether?

Data: \[ A: 264 \text{ kg,} \quad B: 525 \text{ kg} \]
Plan: \[ A + B: \quad 264 \text{ kg} + 525 \text{ kg} \]
   \[ E: \quad 260 + 530 = 790 \]
   \[ C: \quad +525 \]
Answer: He ordered 789 kg of fruit altogether.
1. David has £233 and James has £426. How much do they have altogether?

   Complete the tables.

<table>
<thead>
<tr>
<th>Hundreds</th>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>J</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

   | £          |
   | 233       |
   | 426       |

   | £          |
   | 233       |
   | 426       |

   | £          |
   | 659       |

2. Estimate, then calculate the sum. Show your estimate in detail.

   b) 514 + 256

      \[E: \quad 514 + 256 \approx 510 + 260 = 770\]

      \[C: \quad +2\ 5\ 6\]

      \[514 + 256 = 770\]

   c) 614 + 257

      \[E: \quad 614 + 257 \approx 610 + 260 = 870\]

      \[C: \quad +2\ 5\ 7\]

      \[614 + 257 = 870\]

   d) 614 + 258

      \[E: \quad 614 + 258 \approx 610 + 260 = 870\]

      \[C: \quad +2\ 5\ 8\]

      \[614 + 258 = 870\]

3. Find the data and write a plan. Estimate, calculate and check the result.

   Write the answer as a sentence.

   a) Susan bought 2 rolls of remnant material to make curtains.

      In one roll there was 6 m 5 cm and in the other there was 3 m 62 cm.

      How many cm of material did Susan buy altogether?

      \[\text{Data: Roll A: 6 m 5 cm, Roll B: 3 m 62 cm} \]

      \[\text{Plan: Roll A + Roll B} \quad E: \quad 610 + 360 = 970 \quad C: \quad +3\ 6\ 2\]

      \[\text{Answer: Susan bought 967 cm of material.} \]

   b) Last month, Mum earned £1247 and Dad earned £551 more.

      How much did they earn altogether last month?

      \[\text{Data: M: £1247, D: £1247 + £551} \]

      \[\text{Plan: M + D} \quad E: \quad 1250 + 1800 = 3050 \quad C: \quad +1\ 7\ 9\ 8\]

      \[\text{Answer: They earned £3045 altogether.} \]
1. Complete the drawing. Round the numbers to the nearest whole ten. Estimate, then calculate the sum.

\[ 342 + 753 \]

\[ E: \quad 342 + 753 \approx 340 + 750 = 1090 \]

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>9</td>
<td>5</td>
</tr>
</tbody>
</table>

(\[10 \times 100 = 1000\])

2. Complete the drawing. Round the numbers to the nearest whole ten. Estimate, then calculate the sum.

\[ 537 + 259 \]

\[ \approx 537 + 259 \approx 540 + 260 = 800 \]

<table>
<thead>
<tr>
<th>Hundreds</th>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>9</td>
<td>6</td>
</tr>
</tbody>
</table>

(\[16 \times 1 = 16 + 6\])

3. Fiona has 367 books and her brother Graham has 715 books. How many books do they have altogether?

**Data:**
- **F:** 367 books
- **G:** 715 books

**E:** 370 + 720 = 1090

**Calculation:**

\[
\begin{array}{c|c|c|c}
\text{Th} & \text{H} & \text{T} & \text{U} \\
3 & 6 & 7 & \\
7 & 1 & 5 & \\
1 & 0 & 8 & 2 \\
\end{array}
\quad + \quad \begin{array}{c|c|c|c}
\text{Th} & \text{H} & \text{T} & \text{U} \\
3 & 6 & 7 & \\
7 & 1 & 5 & \\
1 & 0 & 8 & 2 \\
\end{array}
\]

**Answer:**

They had 1082 books altogether.

4. Round these numbers to the nearest:

a) 10:
   - i) 743 \[\approx 740\]
   - ii) 997 \[\approx 1000\]
   - iii) 550 \[\approx 550\]

b) 100:
   - i) 835 \[\approx 800\]
   - ii) 666 \[\approx 700\]
   - iii) 850 \[\approx 900\]
Estimate, then calculate the sums. Write the estimates in detail.

a) $513 + 521$
   
   $E: 513 + 521 \approx 510 + 520 = 1030$
   
   $C: 510 + 520 = 1030$

b) $634 + 723$
   
   $E: 634 + 723 \approx 630 + 720 = 1350$
   
   $C: 630 + 720 = 1350$

c) $358 + 411$
   
   $E: 358 + 411 \approx 360 + 410 = 770$
   
   $C: 360 + 410 = 770$

d) $476 + 218$
   
   $E: 476 + 218 \approx 480 + 220 = 700$
   
   $C: 480 + 220 = 700$

e) $563 + 295$
   
   $E: 563 + 295 \approx 560 + 300 = 860$
   
   $C: 560 + 300 = 860$

Mum wants to make matching dresses for herself and her daughter, Julia. She needs 2 m 35 cm of material for her own dress and 1 m 25 cm for Judith's dress. How much material will she need to buy altogether?

Data: $M: 2 \text{ m } 35 \text{ cm} = 235 \text{ cm}$, $J: 1 \text{ m } 25 \text{ cm} = 125 \text{ cm}$

Estimate: $235 \text{ cm} + 125 \text{ cm} \approx 240 \text{ cm} + 130 \text{ cm} = 370 \text{ cm}$

Calculation: $235 + 125 = 360 \text{ cm}$ (Check: $360 \approx 370$)

Answer: Mum will need to buy 360 cm (= 3 m 60 cm) of material.

a) Kate used a 23 cm 5 mm piece of ribbon to tie up her hair. Linda used a piece 12 cm 5 mm less than Kate. What length was Linda's ribbon?

Data: $K: 23 \text{ cm } 5 \text{ mm} = 235 \text{ mm}$, $L: K - 12 \text{ cm } 5 \text{ mm}$

Estimate: $235 \text{ mm} - 125 \text{ mm} \approx 240 \text{ mm} - 130 \text{ mm} = 110 \text{ mm}$

Check: Calculated difference = estimate

Answer: The length of Linda's ribbon was 110 mm (= 11 cm).

b) Dad bought a piece of wood and cut it into two pieces, one 2 m 35 cm and the other 3 m 15 cm long. What length of wood did Dad buy?

Data: $2 \text{ m } 35 \text{ cm} = 235 \text{ cm}$, $3 \text{ m } 15 \text{ cm} = 315 \text{ cm}$

Estimate: $235 \text{ cm} + 315 \text{ cm} \approx 240 \text{ cm} + 320 \text{ cm} = 560 \text{ cm}$

Check: $235 \text{ cm} + 315 \text{ cm} = 550 \text{ cm}$ (≈ 560 cm)

Answer: The length of wood Dad bought was 550 cm (= 5 m 50 cm).
Round the numbers to the nearest ten, then estimate and calculate the sums.

a) 428 + 541
b) 1328 + 661
c) 462 + 1417

\[
\begin{align*}
E: & \quad 9 \quad 7 \quad 0 \\
\quad & \quad 4 \quad 2 \quad 8 \\
+ & \quad 5 \quad 4 \quad 1 \\
\quad & \quad 9 \quad 6 \quad 9
\end{align*}
\]

\[
\begin{align*}
E: & \quad 1 \quad 9 \quad 9 \quad 0 \\
\quad & \quad 1 \quad 3 \quad 2 \quad 8 \\
+ & \quad 6 \quad 6 \quad 1 \\
\quad & \quad 1 \quad 9 \quad 8 \quad 9
\end{align*}
\]

\[
\begin{align*}
E: & \quad 1 \quad 8 \quad 8 \quad 0 \\
\quad & \quad 4 \quad 6 \quad 2 \\
+ & \quad 1 \quad 4 \quad 1 \quad 7 \\
\quad & \quad 1 \quad 8 \quad 7 \quad 9
\end{align*}
\]

Round the numbers to the nearest ten, then estimate and calculate the sums.

a) \( E: \quad 1 \quad 7 \quad 6 \quad 0 \)
\( E: \quad 1 \quad 4 \quad 5 \quad 0 \)
\( E: \quad 9 \quad 3 \quad 0 \)
\( E: \quad 9 \quad 6 \quad 0 \)

\[
\begin{align*}
\quad & \quad 1 \quad 4 \quad 3 \quad 6 \\
+ & \quad 3 \quad 2 \quad 2 \\
\quad & \quad 1 \quad 7 \quad 5 \quad 8
\end{align*}
\]

\[
\begin{align*}
\quad & \quad 1 \quad 3 \quad 6 \quad 2 \\
+ & \quad 9 \quad 2 \\
\quad & \quad 1 \quad 4 \quad 5 \quad 4
\end{align*}
\]

\[
\begin{align*}
\quad & \quad 5 \quad 7 \quad 2 \\
+ & \quad 3 \quad 5 \quad 6 \\
\quad & \quad 9 \quad 2 \quad 8
\end{align*}
\]

\[
\begin{align*}
\quad & \quad 6 \quad 3 \quad 8 \\
+ & \quad 3 \quad 2 \quad 2 \\
\quad & \quad 9 \quad 6 \quad 0
\end{align*}
\]

b) \( E: \quad 1 \quad 1 \quad 7 \quad 0 \)
\( E: \quad 1 \quad 2 \quad 7 \quad 0 \)
\( E: \quad 9 \quad 5 \quad 0 \)
\( E: \quad 9 \quad 2 \quad 0 \)

\[
\begin{align*}
\quad & \quad 8 \quad 5 \quad 6 \\
+ & \quad 3 \quad 1 \quad 2 \\
\quad & \quad 1 \quad 1 \quad 6 \quad 8
\end{align*}
\]

\[
\begin{align*}
\quad & \quad 3 \quad 5 \quad 8 \\
+ & \quad 9 \quad 1 \quad 1 \\
\quad & \quad 1 \quad 2 \quad 6 \quad 9
\end{align*}
\]

\[
\begin{align*}
\quad & \quad 8 \quad 6 \quad 2 \\
+ & \quad 9 \quad 2 \\
\quad & \quad 9 \quad 5 \quad 4
\end{align*}
\]

\[
\begin{align*}
\quad & \quad 5 \quad 0 \quad 7 \\
+ & \quad 4 \quad 0 \quad 8 \\
\quad & \quad 9 \quad 1 \quad 5
\end{align*}
\]

Uncle Tom gathered 468 kg of pears and 1335 kg of apples from the trees in his orchard. How much fruit did he gather altogether?

Data: \( P: 468 \text{ kg}, \ A: 1335 \text{ kg} \)

Plan: \( P + A: 468 \text{ kg} + 1335 \text{ kg} = 1803 \text{ kg} \)

Answer: He gathered 1803 kg of fruit altogether.

Paul has a piece of wire 5 m 47 cm long but it is 602 cm shorter than he needs. What length of wire does Paul need?

Data: Has: 5 m 47 cm = 547 cm, Needs: 602 cm more

Plan: \( 547 \text{ cm} + 602 \text{ cm} = 1150 \text{ cm} \)

Answer: Paul needs 1149 cm (= 11 m 49 cm) of wire.

Mark Barry Bear's sums with a ✔ or a ✗. Correct his mistakes.

\[
\begin{align*}
a) \ & 221 + 387 \\
\ & \quad 508 \quad ✗ \\
\ & \quad (608)
\end{align*}
\]

\[
\begin{align*}
b) \ & 532 + 209 \\
\ & \quad 741 \quad ✔
\end{align*}
\]

\[
\begin{align*}
c) \ & 459 + 111 \\
\ & \quad 570 \quad ✔
\end{align*}
\]

\[
\begin{align*}
d) \ & 833 + 74 \\
\ & \quad 807 \quad ✗ \\
\ & \quad (907)
\end{align*}
\]

\[
\begin{align*}
e) \ & 567 + 603 \\
\ & \quad 1180 \quad ✗
\end{align*}
\]
1. Fill in the missing digits. Check the addition.

a) \[
\begin{array}{c}
3 & 2 & 4 \\
+ & 2 & 5 & 2 \\
\hline & 5 & 7 & 6 \\
\end{array}
\]

b) \[
\begin{array}{c}
2 & 4 & 9 \\
+ & 4 & 2 & 1 \\
\hline & 6 & 7 & 0 \\
\end{array}
\]

c) \[
\begin{array}{c}
3 & 5 & 2 \\
+ & 2 & 2 & 4 \\
\hline & 5 & 2 & 6 \\
\end{array}
\]

d) \[
\begin{array}{c}
3 & 2 & 7 \\
+ & 2 & 5 & 7 \\
\hline & 1 & 0 & 8 & 4 \\
\end{array}
\]

2. In how many different ways can Jenny choose from these treats?

A: £1.62 p  
B: £1.36 p  
C: £5.45 p  
D: £4.94 p

Write how much she would pay if she bought

a) at most two things:

(1) A: £1.62 p . or B: £1.36 p . or C: £5.45 p . or D: £4.94 p.
(2) A + B = £2.98 p. or A + C = £7.07 p. or A + D = £6.56 p.
B + C = £6.81 p. or B + D = £6.30 p. or C + D = £10.39 p.

b) at least 3 things:  (Do the calculations in your exercise books.)

(3) A + B + C = £8.43 p. . . . . or A + B + D = £7.92 p. . . . .
A + C + D = £12.01 p. . . . or B + C + D = £11.75 p. (4 ways)

3. a) Fill in the missing digits.

i) \[
\begin{array}{c}
3 & 2 & 5 \\
+ & 1 & 3 & 5 \\
\hline & 1 & 5 & 6 & 8 \\
\end{array}
\]

ii) \[
\begin{array}{c}
1 & 3 & 5 \\
+ & 9 & 1 & 3 \\
\hline & 1 & 0 & 4 & 8 \\
\end{array}
\]

iii) \[
\begin{array}{c}
5 & 3 & 9 \\
+ & 8 & 0 & 1 \\
\hline & 1 & 3 & 4 & 0 \\
\end{array}
\]

iv) \[
\begin{array}{c}
5 & 0 & 7 \\
+ & 1 & 8 & 8 \\
\hline & 1 & 6 & 9 & 5 \\
\end{array}
\]

v) \[
\begin{array}{c}
9 & 7 & 5 \\
+ & 3 & 6 & 1 \\
\hline & 1 & 3 & 3 & 6 \\
\end{array}
\]

b) Write an addition which uses each of the digits from 0 to 9 once only.

Try out different solutions. Use your exercise books if you need to.

E.g:

\[
\begin{array}{c}
2 & 8 & 9 \\
+ & 7 & 6 & 4 \\
\hline & 1 & 0 & 5 & 3 \\
\end{array}
\]

\[
\begin{array}{c}
2 & 6 & 9 \\
+ & 7 & 8 & 4 \\
\hline & 1 & 0 & 5 & 3 \\
\end{array}
\]

\[
\begin{array}{c}
 \hspace{2cm} \\
\hspace{2cm} \\
\hline \\
\end{array}
\]

Page 94
1. Freddy Fox was going home. He ran for 579 m, then had a rest. Then he ran for another 356 m and reached his house. How far away had he been from home?

Data: 579 m + 356 m

\[
\begin{array}{c|c|c|c}
\text{Th} & \text{H} & \text{T} & \text{U} \\
5 & 7 & 9 & \text{} \\
3 & 5 & 6 & + \\
9 & 3 & 5 & \text{} \\
\hline
\end{array}
\]

Calculation: 579 + 356 = 935

Answer: He had been 935 m from home.

2. 24 cm 6 mm was cut from a roll of tape. If 254 mm was left, how long was the original roll of tape?

Data: 24 cm 6 mm + 254 mm

\[
\begin{array}{c|c|c|c|c}
\text{Th} & \text{H} & \text{T} & \text{U} & \text{} \\
2 & 4 & 6 & \text{} \\
2 & 5 & 0 & + \\
5 & 0 & 0 & \text{} \\
\hline
\end{array}
\]

Plan: 246 mm + 254 mm

Answer: The original roll was 500 mm (50 cm) long.

3. Practise addition. Check by adding up ↑, then down ↓.

a) \[5 \ 0 \ 3 + 1 \ 2 \ 4 \ 3 = 1 \ 7 \ 8 \ 9\]
b) \[4 \ 1 \ 1 + 3 \ 7 \ 8 = 1 \ 8 \ 8 \ 9\]
c) \[9 \ 6 + 2 \ 0 \ 3 = 8 \ 0 \ 2\]
d) \[4 \ 4 \ 0 + 1 \ 0 \ 1 \ 5 = 2 \ 9 \ 7 \ 0\]
e) \[3 \ 0 \ 7 + 2 \ 0 \ 4 = 1 \ 3 \ 1 \ 2\]
f) \[5 \ 9 \ 0 + 2 \ 7 = 1 \ 0 \ 5 \ 9\]
g) \[2 \ 5 + 5 \ 4 \ 6 = 1 \ 8 \ 7 \ 1\]
h) \[7 \ 3 \ 4 + 5 \ 0 \ 7 = 1 \ 5 \ 4 \ 1\]
i) \[2 \ 6 \ 6 + 5 \ 4 \ 5 = 1 \ 9 \ 2 \ 1\]
j) \[9 \ 3 \ 7 + 5 \ 5 = 1 \ 8 \ 9 \ 3\]

4. Draw amounts to correspond to the numbers shown on the number lines.

Choose from 1000 500 200 100 50

E.g.

\[\begin{array}{c}
\text{200} \\
\text{500} \\
\text{700} \\
\text{850} \\
\text{1000} \\
\text{1650} \\
\text{1350}
\end{array}\]
1. Change the prices of the soft toys to pence.

\[
\begin{array}{cccc}
\text{Bear} & \text{Cat} & \text{Elephant} & \text{Tortoise} \\
£5.46 & £3.56 & £8.65 & £6.49 \\
546\ p & 356\ p & 865\ p & 649\ p
\end{array}
\]

By rounding the prices to the nearest 10 p, estimate the difference between

a) the bear and the cat: \(546\ p - 356\ p \approx 550\ p - 360\ p = 190\ p\)

b) the elephant and the tortoise: \(865\ p - 649\ p \approx 870\ p - 650\ p = 220\ p\)

c) the elephant and the cat: \(865\ p - 356\ p \approx 870\ p - 360\ p = 510\ p\)

d) the tortoise and the bear: \(649\ p - 546\ p \approx 650\ p - 550\ p = 100\ p\)

2. Circle the correct answers.

a) Estimate the difference between 678 and 432
   
i) by rounding to the nearest 100: 100 200 300 400
   
ii) by rounding to the nearest 10: 240 250 260 270

b) Estimate the difference between 582 and 147
   
i) by rounding to the nearest 100: 100 300 500 700
   
ii) by rounding to the nearest 10: 420 430 440 540

3. Estimate the difference by rounding the numbers to the nearest 10:

a) \(674 - 466 \approx 670 - 470 = 200\)

b) \(682 - 444 \approx 680 - 440 = 240\)

c) \(639 - 451 \approx 640 - 450 = 190\)

d) \(926 - 543 \approx 930 - 540 = 390\)

e) \(918 - 550 \approx 920 - 550 = 370\)
1. Fill in the missing numbers.

- 60  340
  400  530
  240  620

- 160
  400  590
  800  370

2. Compare the two sides. Fill in the missing signs.

a) 300 + 800 \(<\) 400 + 900  b) 126 – 34 \(>\) 46 + 38

c) 1000 – 400 \(<\) 1200 – 400  d) 6 × 40 \(=\) 60 × 4

e) 1500 – 800 \(>\) 1400 – 900  f) 420 ÷ 7 \(>\) 420 ÷ 70

3. Which is more? How many more? Write subtractions and inequalities.

a) The smallest 4-digit number compared with the greatest 3-digit number.
   \[1000 - 999 = 1\] \(1000 > 999\)

b) The smallest 4-digit number compared with the smallest 3-digit number.
   \[1000 - 100 = 900\] \(1000 > 100\)

c) The smallest 4-digit number compared with the smallest 2-digit number.
   \[1000 - 10 = 990\] \(1000 > 10\)

d) The greatest 3-digit whole ten compared with the greatest 3-digit hundred.
   \[990 - 900 = 90\] \(990 > 900\)

e) The smallest 4-digit hundred compared with the smallest 4-digit whole ten.
   \[1000 - 1000 = 0\] \(1000 = 1000\)

f) The smallest whole hundred compared with the smallest whole ten.
   \[100 - 10 = 90\] \(100 > 10\)

4. Fill in the missing numbers and write the rule. * Do these calculations below.

\[
\begin{array}{cccccccc}
670 & 1000 & 549 & 394 & 777 & 893 & 987 & 573 & 464 \\
420 & 814 & 231 & 384 & 555 & 618 & 555 & 348 & 59 \\
250 & 186 & 318 & 10 & 222 & 275 & 432 & 225 & 405 \\
\end{array}
\]

\[
\begin{array}{cccc}
5 & 7 & 3 \\
3 & 4 & 8 \\
2 & 2 & 5 \\
4 & 6 & 4 \\
5 & 9 \\
4 & 0 & 5 \\
\end{array}
\]
1

Complete the additions. Write a subtraction for each one.

<table>
<thead>
<tr>
<th></th>
<th>a)</th>
<th>b)</th>
<th>c)</th>
<th>d)</th>
<th>e)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>543</td>
<td>156</td>
<td>217</td>
<td>632</td>
<td>1254</td>
</tr>
<tr>
<td>+</td>
<td>332</td>
<td>833</td>
<td>442</td>
<td>235</td>
<td>642</td>
</tr>
<tr>
<td></td>
<td>875</td>
<td>989</td>
<td>659</td>
<td>867</td>
<td>1896</td>
</tr>
<tr>
<td>-</td>
<td>543</td>
<td>156</td>
<td>217</td>
<td>632</td>
<td>1254</td>
</tr>
<tr>
<td></td>
<td>332</td>
<td>833</td>
<td>442</td>
<td>235</td>
<td>642</td>
</tr>
</tbody>
</table>

2

Estimate the difference (by rounding to the nearest 10), then do the calculation.

876 – 345  
\[ 880 - 350 = 530 \]

3

Practise subtraction.

<table>
<thead>
<tr>
<th></th>
<th>a) i) 386 - 215 = 171</th>
<th>ii) 386 - 216 = 170</th>
<th>iii) 386 - 217 = 169</th>
<th>iv) 386 - 218 = 168</th>
</tr>
</thead>
<tbody>
<tr>
<td>b) i) 768 - 245 = 523</td>
<td>ii) 768 - 265 = 503</td>
<td>iii) 768 - 285 = 483</td>
<td>iv) 768 - 305 = 463</td>
<td></td>
</tr>
<tr>
<td>c) i) 504 - 301 = 203</td>
<td>ii) 504 - 311 = 193</td>
<td>iii) 504 - 321 = 183</td>
<td>iv) 504 - 331 = 173</td>
<td></td>
</tr>
</tbody>
</table>

4

Use the numbers in the clown to write subtractions. The difference should be the number in his hat.

<table>
<thead>
<tr>
<th></th>
<th>948 - 596 = 352</th>
<th>462 - 110 = 352</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>352</td>
<td>352</td>
</tr>
<tr>
<td></td>
<td>621 - 269 = 352</td>
<td>573 - 221 = 352</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Page 98
1. Fill in the missing numbers.

```
820 - 220 = 600
260 + 340 = 600
290 + 210 = 500
780 - 280 = 500

960 - 160 = 800
750 + 50 = 800

440 - 140 = 300
```

2. How much money did we have left after our holiday? Complete the drawing. Estimate by rounding to the nearest whole ten. Do the calculation and check it.

```
a) Had: 100 10 10 10 10 10 10 10
     ≈ 340
Spent: 100 10 10 10 10 10 10 10
       ≈ 230
Had left: 100 10 10 10 10 10 10 10
         ≈ 110

b) Had: 100 10 10 10 10 10 10 10
      ≈ 550
Spent: 100 10 10 10 10 10 10 10
      ≈ 340
Had left: 100 10 10 10 10 10 10 10
         ≈ 210
```

3. Estimate the difference by rounding the numbers to the nearest whole ten. Do the calculation, then check it in your head with an addition.

```
a) i) 9 4 3 - 6 1 2 = 3 3 0
    3 3 1 - 5 4 0 = 5 4 0
    E: 3 3 0

   ii) 7 8 5 - 2 4 5 = 5 4 0
     5 4 0 - 5 0 1 = 5 0 0
     E: 5 0 0

   iii) 8 4 7 - 3 4 6 = 5 0 1
     5 0 1 - 5 1 2 = 5 1 2
     E: 5 1 0

   iv) 1 8 6 4 - 1 3 5 2 = 1 1 1 2
     1 1 1 2 - 1 1 0 4 = E: 1 1 1 0

   v) 1 7 5 6 - 6 5 2 = 1 1 0 4

b) i) 8 7 2 - 3 5 6 = 5 1 6
    5 1 6 - 4 2 3 = 2 1 6
    E: 5 1 6

   ii) 7 8 0 - 3 5 7 = 4 2 3
     4 2 3 - 2 1 6 = 2 0 7
     E: 4 2 3

   iii) 8 2 5 - 6 0 9 = 2 1 6
     2 1 6 - 2 5 3 = 3 3 2
     E: 2 2 0

   iv) 7 3 5 - 4 8 2 = 5 7 1
     5 7 1 - 3 3 2 = 2 3 9
     E: 2 6 0

   v) 9 0 3 - 5 7 1 = 3 3 2
     3 3 2 - 3 3 0 = E: 3 3 0
```
1. Estimate the difference by rounding the numbers to the nearest 10:
   a) 951 – 549 ≈ 950 – 550 = 400
   b) 1364 – 652 ≈ 1360 – 650 = 710
   c) 1374 – 648 ≈ 1370 – 650 = 720
   d) 1324 – 657 ≈ 1320 – 660 = 660
   e) 1763 – 450 ≈ 1760 – 450 = 1310

2. A and B are two numbers.
   H is an estimate of their difference by rounding them to the nearest 100.
   T is an estimate of their difference by rounding them to the nearest 10.

   Complete the table.

<table>
<thead>
<tr>
<th>A</th>
<th>723</th>
<th>971</th>
<th>314</th>
<th>636</th>
<th>809</th>
<th>527</th>
<th>715</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>274</td>
<td>508</td>
<td>151</td>
<td>463</td>
<td>347</td>
<td>463</td>
<td>315</td>
</tr>
<tr>
<td>H</td>
<td>400</td>
<td>500</td>
<td>100</td>
<td>100</td>
<td>500</td>
<td>0</td>
<td>400</td>
</tr>
<tr>
<td>T</td>
<td>450</td>
<td>460</td>
<td>160</td>
<td>180</td>
<td>460</td>
<td>70</td>
<td>400</td>
</tr>
</tbody>
</table>

3. Estimate the difference by rounding to the nearest 10, then do the calculation.
   a) 854 – 403 E: 850 – 400 = 450 ................. –  4  5  1
       8  5  4
       4  5  3

   b) 785 – 64 E: 790 – 60 = 730 ................. –  7  8  5
       7  2  1

4. Solve each problem in your exercise book. Check your result. Write the answer.
   a) Sarah cut 2 m 17 cm from a 3 m 24 cm piece of lace to trim a cushion. How much lace did she have left?  
      324 cm – 217 cm = 107 cm = 1 m 7 cm
      Answer: Sarah had 1 m 7 cm of lace left.  
      Check: 107 cm + 217 cm = 324 cm

   b) Jim bought 5 litres of plant food. He used 2 litres 78 cl on his vegetables and 1 litre 25 cl on the other plants in his garden. How much plant food did he have left?  
      500 cl – (278 cl + 125 cl) = 500 cl – 403 cl = 97 cl
      Answer: Jim had 97 cl of plant food left.  
      Check: 97 cm + 403 cl = 500 cl
Fill in the missing numbers. Continue the pattern once more.

\[
\begin{array}{cccccc}
8 & 6 & 8 & 6 & 5 & 5 \\
- & 2 & 1 & 3 & - & 1 & 3 & 2 \\
6 & 5 & 5 & 5 & 2 & 3 & 3 & 0 & 2 & 1 & 5 & 3 & 1 & 2 & 0 \\
- & 2 & 2 & 1 & - & 1 & 4 & 9 & - & 3 & 3 & - & 2 & 0 & 1 & 0 & 0 \\
\end{array}
\]

E.g:

One of these statements is not correct. Circle its sign.

✳ The difference between 597 and 389 is 208.
✠ The difference between 589 and 397 is less than one thousand.
✰ The difference between 687 and 265 is an odd number.

Write down the data. Make a plan. Estimate, calculate and check the answer.

a) There are 857 fruit trees in an orchard. 614 are apple trees and the rest are plum trees. How many plum trees are in the orchard?

\[
\begin{array}{cccc}
\text{Data:} & T: 857; & A: 614 & \text{Calculation} \\
\text{Plan:} & P: T - A = 857 - 614 & & 243 \\
\text{Estimation:} & 860 - 610 = 250 & & 243 \\
\text{Answer:} & \text{There are 243 plum trees in the orchard.} & & 243 \\
\end{array}
\]

b) Mary and Jane are collecting buttons. Mary has 857 buttons. Jane has 641 fewer buttons than Mary. How many buttons does Jane have?

\[
\begin{array}{cccc}
\text{Data:} & M: 857; & J: M - 641 & \text{Calculation} \\
\text{Plan:} & 857 - 641 & & 216 \\
\text{Estimation:} & 860 - 640 = 220 & & 216 \\
\text{Answer:} & \text{Jane has 216 buttons.} & & 216 \\
\end{array}
\]

a) Alan and Barry have 945 stamps altogether. Complete the table to show how many stamps they could each have.

<table>
<thead>
<tr>
<th>A</th>
<th>321</th>
<th>430</th>
<th>238</th>
<th>536</th>
<th>372</th>
<th>264</th>
<th>537</th>
<th>222</th>
<th>73</th>
<th>27</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>624</td>
<td>515</td>
<td>707</td>
<td>409</td>
<td>573</td>
<td>681</td>
<td>408</td>
<td>723</td>
<td>872</td>
<td>918</td>
</tr>
</tbody>
</table>

b) Cindy and Diana are collecting 1 p coins. Cindy has 345 more coins than Diana. Complete the table to show how many coins they could each have.

<table>
<thead>
<tr>
<th>C</th>
<th>756</th>
<th>468</th>
<th>876</th>
<th>754</th>
<th>909</th>
<th>662</th>
<th>1058</th>
<th>1068</th>
<th>1567</th>
<th>1628</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>411</td>
<td>123</td>
<td>531</td>
<td>409</td>
<td>564</td>
<td>317</td>
<td>713</td>
<td>723</td>
<td>1222</td>
<td>1283</td>
</tr>
</tbody>
</table>
Write down the data. Make a plan. Estimate, calculate and check the answer.

a) A large barrel can hold 578 litres and a small barrel can hold 256 litres. How much more liquid can the large barrel hold than the small one?

\[ \text{Data: } L: 578 \quad S: 256 \]

\[ \text{Plan: } L - S = 578 - 256 \]

\[ \text{Estimation: } 580 - 260 = 320 \text{ (litres)} \]

\[ \text{Check: } 578 - 256 = 322 \]

Answer: The large barrel holds 322 litres more than the small one.

b) The length of Molly's bedroom is 4 m 32 cm, which is 1 m 27 cm more than its width. What is the width of Molly's bedroom?

\[ \text{Data: } L: 4 \text{ m 32 cm; } W = L - 1 \text{ m 27 cm} \]

\[ \text{Plan: } W = 432 \text{ cm} - 127 \text{ cm} \]

\[ \text{Estimation: } 430 - 130 = 300 \text{ cm} \]

Answer: The width is 3 m 5 cm.

---

What number is:

a) the difference between 677 and 352?

\[ 677 - 352 = 325 \]

b) 352 more than 677?

\[ 677 + 352 = 1029 \]

c) 352 less than 677?

\[ 677 - 352 = 325 \]

d) the sum of 677 and 352?

\[ 677 + 352 = 1029 \]

---

There were 236 women, 347 men, 163 boys and 148 girls on a beach.

a) How many people were on the beach altogether?

\[ 894 \]

b) How many of them were adults?

\[ 583 \]

c) How many more adults than children were there?

\[ 272 \]

d) i) Were there more males or females on the beach?

Males

ii) How many more?

\[ 126 \]

---

Complete the subtractions.

a) \[ \begin{array}{c}
876 \\
154 \\
\hline
722 \\
\end{array} \]

b) \[ \begin{array}{c}
952 \\
704 \\
\hline
248 \\
\end{array} \]

c) \[ \begin{array}{c}
969 \\
456 \\
\hline
513 \\
\end{array} \]

d) \[ \begin{array}{c}
859 \\
327 \\
\hline
532 \\
\end{array} \]

e) \[ \begin{array}{c}
1764 \\
1518 \\
\hline
246 \\
\end{array} \]
1. Complete the additions. Write a subtraction for each one.
   a) \[\begin{array}{c}
   4 & 5 & 5 \\
   + & 1 & 4 & 2 \\
   \hline
   5 & 9 & 7
   \end{array}\]  
   b) \[\begin{array}{c}
   3 & 7 & 3 \\
   + & 3 & 0 & 5 \\
   \hline
   6 & 7 & 8
   \end{array}\]  
   c) \[\begin{array}{c}
   5 & 5 & 4 \\
   + & 1 & 3 & 2 & 5 \\
   \hline
   1 & 8 & 7 & 9
   \end{array}\]  
   d) \[\begin{array}{c}
   1 & 3 & 5 & 6 \\
   + & 2 & 5 & 0 \\
   \hline
   1 & 6 & 0 & 6
   \end{array}\]  
   e) \[\begin{array}{c}
   5 & 5 & 3 \\
   + & 4 & 6 & 0 \\
   \hline
   1 & 0 & 1 & 3
   \end{array}\]  

2. Complete the subtractions. Write the differences in increasing order.
   a) \[\begin{array}{c}
   6 & 7 & 3 \\
   - & 3 & 2 & 1 \\
   \hline
   3 & 5 & 2
   \end{array}\]  
   b) \[\begin{array}{c}
   4 & 9 & 6 \\
   - & 2 & 7 & 2 \\
   \hline
   2 & 2 & 4
   \end{array}\]  
   c) \[\begin{array}{c}
   8 & 9 & 3 \\
   - & 6 & 2 & 8 \\
   \hline
   2 & 6 & 5
   \end{array}\]  
   d) \[\begin{array}{c}
   5 & 4 & 1 \\
   - & 5 & 5 & 2 \\
   \hline
   1 & 8 & 9
   \end{array}\]  

3. Solve the problem in your exercise book. Check your result. Write the answer.
   On Monday, the children picked 253 apples in their grandparents' orchard. On Tuesday they picked 89 more apples than they did on Monday. How many apples did the children pick altogether? Answer: \[253 + 253 + 89 = 595\]. The children picked 595 apples altogether.

4. Use every number on a dice only once in each subtraction, so that the subtraction makes sense and the difference is:
   a) at least 300
   b) the smallest possible
   c) between 200 and 300
   d) even
   e) the greatest possible
   f) divisible by 10

   E.g: \[\begin{array}{c}
   6 & 5 & 4 \\
   - & 2 & 3 & 1 \\
   \hline
   4 & 2 & 3
   \end{array}\]  
   E.g: \[\begin{array}{c}
   4 & 1 & 2 \\
   - & 3 & 6 & 5 \\
   \hline
   2 & 4 & 1
   \end{array}\]  
   E.g: \[\begin{array}{c}
   6 & 5 & 3 \\
   - & 4 & 1 & 2 \\
   \hline
   2 & 4 & 1
   \end{array}\]  
   Impossible!
The sum of any two adjacent numbers is the number directly above them. The same sign means the same number. Fill in the missing numbers.

<table>
<thead>
<tr>
<th>a)</th>
<th>b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000 + 800 * 1200</td>
<td>900 + 360 * 540</td>
</tr>
<tr>
<td>(\downarrow 400 )</td>
<td>(\downarrow 400 + 800 )</td>
</tr>
</tbody>
</table>

Work out the rule and fill in the missing numbers.

<table>
<thead>
<tr>
<th>a)</th>
<th>b)</th>
</tr>
</thead>
</table>
| \(\begin{array}{cccc}
227 & 148 & 112 & 87 \\
79 & 36 & 25 & \\
43 & 11 & \\
32 & \\
\end{array}\) | \(\begin{array}{cccc}
879 & 555 & 333 & 121 \\
324 & 222 & 212 & \\
102 & 10 & \\
92 & \\
\end{array}\) |

Rule: The difference between two adjacent numbers is the number directly below them.

Write your answer as an operation. What number is:

a) 189 more than the sum of 372 and 476? \(372 + 476 + 189 = 1037 \ldots \ldots\)

b) 189 more than the difference between 372 and 476? \(.476 - 372 + 189 = 293 \ldots \ldots\)

c) 189 less than the sum of 372 and 476? \(372 + 476 - 189 = 659 \ldots \ldots\)

d) 178 less than 4 times 80? \(4 \times 80 - 178 = 142 \ldots \ldots\)

e) 593 more than 1 sixth of 480? \(.480 ÷ 6 + 593 = 673 \ldots \ldots\)

Which numbers can be written instead of the letters to make the statements true?

i) \(589 + a = 832\) \(\quad\) ii) \(645 - d = 331\) \(\quad\) iii) \(g - 375 = 412\)
\[ a = 243 \quad d = 314 \quad g = 787 \]
\(589 + b > 832\) \(\quad\) \(645 - e \geq 331\) \(\quad\) \(h - 375 < 412\)
\[ b : 244, 245, 246, \ldots \quad e : 314, 313, \ldots \quad h : 786, 785, \ldots \]
\(589 + c \leq 832\) \(\quad\) \(645 - f < 331\) \(\quad\) \(i - 375 > 412\)
\[ c : 243, 242, \ldots \quad f : 315, 316, \ldots, 645 \quad i : 788, 789, \ldots \]

The same letter stands for the same digit. What is the value of each letter? E.g: \(\begin{array}{c}
O \quad N \quad E \\
+ \quad F \quad O \quad U \quad R \\
\end{array}\)
\(\begin{array}{c}
1 \quad 8 \quad 9 \\
5 \quad 1 \quad 6 \quad 0 \\
\end{array}\)
\(\begin{array}{c}
F \quad I \quad V \quad E \\
3 \quad 4 \quad 9 \\
\end{array}\)
\(\begin{array}{c}
1 \quad 6 \quad 9 \quad 4 \\
\end{array}\)

Write the sum with digits.

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The same letter stands for the same digit within each part. What is the value of each letter? Try it out in your exercise books first.

a) \[ \begin{align*}
A & \quad A \\
B & \quad B \\
+ & \quad C \\
\hline
A & \quad B \\
\end{align*} \]

b) \[ \begin{align*}
A & \quad B \\
B & \quad A \\
+ & \quad A \\
\hline
B & \quad A \\
\end{align*} \]

c) \[ \begin{align*}
A & \quad A & \quad A \\
B & \quad A & \quad A \\
+ & \quad C & \quad C \\
\hline
A & \quad A & \quad A \\
\end{align*} \]

At least 9 possible answers, e.g:

A = 1, B = 9, C = 8
A = 7, B = 1, C = 4
A = 1, B = 0, C = 9

(Unique answer)

Join up the numbers to their approximate positions on the number line.

Practise addition. Check by adding up ↑, then down ↓.

a) \[ \begin{align*}
1 & \quad 6 & \quad 0 & \quad 1 \\
+ & \quad 3 & \quad 3 & \quad 0 \\
\hline
1 & \quad 9 & \quad 9 & \quad 7 \\
\end{align*} \]

b) \[ \begin{align*}
2 & \quad 2 & \quad 2 \\
+ & \quad 9 & \quad 9 & \quad 1 \\
\hline
2 & \quad 3 & \quad 3 & \quad 2 \\
\end{align*} \]

c) \[ \begin{align*}
8 & \quad 7 \\
+ & \quad 5 & \quad 0 & \quad 2 \\
\hline
8 & \quad 1 & \quad 9 \\
\end{align*} \]

d) \[ \begin{align*}
3 & \quad 0 & \quad 3 \\
+ & \quad 1 & \quad 5 & \quad 1 & \quad 6 \\
\hline
4 & \quad 5 & \quad 1 & \quad 6 & \quad 2 & \quad 0 & \quad 6 \\
\end{align*} \]

e) \[ \begin{align*}
1 & \quad 9 & \quad 4 \\
+ & \quad 6 & \quad 0 & \quad 0 \\
\hline
1 & \quad 0 & \quad 0 & \quad 0 \\
\end{align*} \]

f) \[ \begin{align*}
1 & \quad 3 & \quad 9 & \quad 0 \\
+ & \quad 5 & \quad 8 & \quad 2 \\
\hline
1 & \quad 9 & \quad 7 & \quad 9 \\
\end{align*} \]

g) \[ \begin{align*}
4 & \quad 2 \\
+ & \quad 1 & \quad 8 & \quad 0 & \quad 1 \\
\hline
2 & \quad 6 & \quad 8 & \quad 2 \\
\end{align*} \]

h) \[ \begin{align*}
1 & \quad 6 & \quad 3 \\
+ & \quad 9 & \quad 0 & \quad 7 \\
\hline
1 & \quad 1 & \quad 4 & \quad 0 \\
\end{align*} \]

i) \[ \begin{align*}
7 & \quad 3 & \quad 2 \\
+ & \quad 7 & \quad 4 & \quad 7 \\
\hline
1 & \quad 6 & \quad 0 & \quad 3 \\
\end{align*} \]

j) \[ \begin{align*}
9 & \quad 8 & \quad 7 \\
+ & \quad 1 & \quad 2 & \quad 3 \\
\hline
1 & \quad 1 & \quad 2 & \quad 3 \\
\end{align*} \]

Join up the equal values.

- \[ 589 - 194 \]
- \[ 367 + 183 \]
- \[ 862 - 217 \]
- \[ 265 + 69 + 171 \]
- \[ 505 \]
- \[ 500 \]
- \[ 2000 - 1111 \]
- \[ 550 \]
- \[ 550 + 5 \]
- \[ 1500 - 10 \times 100 \]
- \[ 889 \]
- \[ 10 \]
- \[ 1 \] tenth of 1500

Page 105
1. Count the number of faces, vertices and edges of each solid and fill in the table.

<table>
<thead>
<tr>
<th>Solid Type</th>
<th>Square-based pyramid</th>
<th>Triangle-based prism</th>
<th>Cuboid</th>
<th>Cube</th>
<th>Hexagonal prism</th>
<th>Triangle-based pyramid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faces</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Vertices</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Edges</td>
<td>8</td>
<td>9</td>
<td>12</td>
<td>12</td>
<td>18</td>
<td>6</td>
</tr>
</tbody>
</table>

2. Join up the solids to the correct net.

3. Colour the plane shapes which are bordered by an unbroken line.

Tick any circles with red, any rectangles with blue and any triangles with green.

4. Draw the shapes described on a squared grid sheet (or in your exercise books).
   a) A line 8 units long which is divided into 3 segments, 2 of them equal.
   b) A rectangle which has perimeter 8 units.
   c) A plane shape which has area 8 square units and perimeter 14 units.

   Accurate drawings required.
1

How long is the perimeter of this shape?

First draw the perimeter as one horizontal line.
Draw each side in letter order and label it.

\[7 + 3 + 2 + 2 + 5 + 5 = 24\]

a) If the unit used is \(\text{cm}\), then Perimeter = \(24\)

b) If the unit used is \(1\text{ cm}\), then Perimeter = \(12\) cm

c) If the unit used is \(\text{cm}\), then Perimeter = \(8\)

2

Complete the table to show the perimeter \((P)\) and area \((A)\) of each shape.

<table>
<thead>
<tr>
<th>(P)</th>
<th>16</th>
<th>12</th>
<th>16</th>
<th>24</th>
<th>16</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>16</td>
<td>8</td>
<td>12</td>
<td>11</td>
<td>9</td>
<td>5</td>
</tr>
</tbody>
</table>

3

What is the area of each shape? Write the number of units inside each one.
(Shape 12 has been divided up into easier parts.)
1
Write the opposite part of each pair.

Low → High
Under → Over
Right → Left
Up → Down
Small → Large
Less → More
Front → Back
Thick → Thin

2
This is a plan of a classroom. Follow the instructions.

Tick:
- Column 5 in green
- Row 3 in red
- Column 2 in blue

Colour:
- (C2, R1) in green
- (C1, R3) in red
- (C5, R2) in blue

3
Follow the instructions and draw the pictures.

a) Right 1, Up 1, R1, Down 1, R3, D2, Left 1, U1, L2, D1, L1, U1, L1, U1.

\[ P = 18 \text{ units} \]
\[ A = 8 \text{ unit squares} \]

b) R3, U1, R2, D1, L1, D2, L4, U2.

\[ P = 16 \text{ units} \]
\[ A = 10 \text{ unit squares} \]

Write instructions on how to draw these shapes.

c) \[ R1, D1, R1, U1, R1, D1, R1, U1, R1, D2, L1, D2, R1, D1, L5, U1, R1, U2, L1, U1 \]

\[ P = 28 \text{ units} \]
\[ A = 19 \text{ unit squares} \]

d) \[ U1, R1, U3, R1, D3, R3, U1, R1, D3, L1, U1, L3, D3, L1, U3, L1 \]

\[ P = 30 \text{ units} \]
\[ A = 14 \text{ unit squares} \]
Draw an arrow on each compass, so that it points in the given direction.

Start facing North. Follow the instructions. In which direction are you facing?

a) Turn 2 right angles to the left, then 1 right angle to the right.
   *Compass point*: West

b) Turn 3 right angles to the right, then half a right angle to the left.
   *Compass point*: South West

c) Turn 2 right angles to the right, then 1 and a half right angles to the right.
   *Compass point*: North West

Start from the point. Follow the instructions and draw the shape.

a) N3, W1, NE1, E3, SE1, W1, S3, W3.

b) E1, NE1, E3, SE1, E2, SW2, W5, NW1, N1

c) N1, NE2, E4, SE1, E2, SE1, S1, W1, N1, W2, S1, W3, N1, W2, S1, W3.

d) NW1, W1, SW1, S1, SW1, W3, NW1, S2, SE2, E2, NE2, N2, NE1, E1.

A man walked 1 km South, then 3 km West, then 1 km North. How far in which direction does he still have to walk to get back to his starting point?
   *3 km East*
Continue the sequences for 4 terms in each direction. Write the rules.

a) \[340, 365, 390, 415, 440, 465, 490, 515, 540, 565, 590\] \textit{Rule: Add 25}

b) \[245, 315, 385, 455, 525, 595, 665, 735, 805, 875, 945\] \textit{Rule: Add 70}

c) \[1263, 1203, 1143, 1083, 1023, 963, 903, 843, 783, 723, 663\] \textit{Rule: Subtract 60}

d) \[1140, 1105, 1070, 1035, 1000, 965, 930, 895, 860, 825, 790\] \textit{Rule: Subtract 35}

Draw the shapes described on a squared grid sheet (or in your exercise books).

a) A plane shape which has area 8 square units and perimeter 12 units.

b) A plane shape which has area 8 square units and perimeter 18 units.

c) A square which has perimeter 12 units.

Practise calculation.

a) \[197 + 100 + 10 = \fbox{207}\] b) \[874 - 50 \times 5 = \fbox{624}\]

c) \[60 \times 6 + 512 = \fbox{872}\] d) \[270 + 9 + 888 = \fbox{918}\]

e) \[(614 + 85) + 3 = \fbox{233}\] f) \[320 + (1000 - 968) = \fbox{10}\]

g) \[150 \times 2 + 720 = \fbox{1020}\] h) \[(390 - 70) + 4 = \fbox{80}\]

Which positive, whole numbers can be written instead of the letters?

i) \[690 + \boxed{a} = 943\] \[a = \boxed{253}\]

ii) \[865 - \boxed{d} = 553\] \[d = \boxed{312}\]

iii) \[g - 597 = 634\] \[g = \boxed{1231}\]

\[300 + \boxed{b} < 412 - 99\] \[b : 0, 1, 2, ..., 12\]

\[865 - \boxed{e} \geq 442\] \[e : 0, 1, ..., 423\]

\[h - 486 < 523\] \[h : 1008, 1007, ...\]

\[456 + \boxed{c} = 832\] \[c = \boxed{376}\]

\[865 - \boxed{f} < 442\] \[f : 424, 425, ..., \]

\[i - 486 > 523\] \[i : 1010, 1011, ...\]

Draw a picture on this grid using only straight lines.

Draw a dot at the starting point.
Write instructions on how to draw it.