Answers Day 1-

50 + 1000

18 ÷ 1

1050

18

Put these cars in order of price, starting with the lowest price.

A. £3,000
B. £2,199
C. £3,250
D. £2,800

There are 110 people on a train.

At the next station, 60 people get off the train and 25 people get on the train.

How many people are on the train now?

75

What number is the arrow pointing to?

0

6

18

Answers Day 2-

6 × 6

125 − 50

36

75

Complete the tally chart

<table>
<thead>
<tr>
<th>Shape</th>
<th>Tally</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circle</td>
<td>II</td>
<td>2</td>
</tr>
<tr>
<td>Pentagon</td>
<td>III</td>
<td>4</td>
</tr>
<tr>
<td>Square</td>
<td>II</td>
<td>2</td>
</tr>
<tr>
<td>Triangle</td>
<td>III</td>
<td>7</td>
</tr>
</tbody>
</table>

What fraction of this shape is shaded?

\[ \frac{3}{9} \]

Mrs Williams has 80 sweets.

She gives 17 girls and 14 boys a sweet.

How many sweets are left?

49
Answers Day 3-

\[
\begin{array}{c}
55 \div 5 \\
20 \times 30 \\
\hline
11 \\
600 \\
\hline
60 \text{ is 15 more than } 45 \\
92 \text{ is 15 more than } 77 \\
\hline
\text{How many edges does a triangular prism have?} \\
\framebox{9} \\
\hline
\text{Mr Smith had 96 Christmas cards to post. He has posted 48 so far. How many Christmas cards does he have left to post?} \\
\framebox{47}
\end{array}
\]

Answers Day 4-

\[
\begin{array}{c}
356 - 9 \\
41 + 19 \\
\hline
347 \\
60 \\
\hline
\text{Write the number 374 in words} \\
\text{Three hundred and seventy-four} \\
\text{Write the number nine hundred and two in figures} \\
902 \\
\hline
\text{Show the time twenty to seven on the clock} \\
\hline
\text{Jamie has £29. Binky has £12 less than Jamie. How much money do they have in total?} \\
\framebox{46}
\end{array}
\]
1. Jack is working out $844 \div 4$ using a place value chart.

<table>
<thead>
<tr>
<th>H</th>
<th>T</th>
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<tbody>
<tr>
<td>100</td>
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</tbody>
</table>

a) Talk about Jack’s method with a partner.
b) Complete the division.

$$844 \div 4 = 211$$

2. Use Jack’s method to work out these divisions.

a) $525 \div 5 = 105$
b) $636 \div 6 = 106$
c) $840 \div 8 = 105$
d) $903 \div 3 = 301$

3. Eva is working out $844 \div 4$ using a part-whole model.

```
844
800
40
4
```

Complete Eva’s method.

$$844 \div 4 = 211$$

4. A ball of string is 848 cm long.
   It is cut into 4 equal pieces.
   What is the length of one piece of string?

$$212\text{cm}$$

5. Whitney is using flexible partitioning to divide a 3-digit number.

```
856
800
40
16
```

Could Whitney have partitioned her number another way?
Eva has a piece of ribbon. The ribbon measures 839 cm long. How much ribbon would be left over if she cuts it into:

a) 4 equal pieces
b) 6 equal pieces
c) 8 equal pieces

Can Eva cut the ribbon into equal pieces with no ribbon left over? Explain your answer.

Use 15 counters and a place value chart.

a) Make a number that is divisible by 3
b) Make a number that has a remainder of 1 when divided by 3
c) Make a number that has a remainder of 2 when divided by 3

Create your own problem like this for a partner.
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td>1</td>
<td><img src="image1" alt="Number Line" /></td>
</tr>
<tr>
<td>2</td>
<td><img src="image2" alt="Number Line" /></td>
</tr>
<tr>
<td>3</td>
<td><img src="image3" alt="Number Line" /></td>
</tr>
</tbody>
</table>
| 4 | a) 1,600  
   b) 7,130 |
| 5 | 2,600 2,800 |
| 6 | ![Number Line](image4) |
| 7 | a) A = 2,000  
   B = 7,500  
   C = 9,990  
   b) Any three numbers between 2,000 and 7,500 |
| 8 | If it went up in 1,000s there would be 10 intervals between 0 and 10,000  
   There are 20 intervals on the number line so it goes up in 500s. |
| 9 | a) Various possible answers as long as they are an equal distance from 2,400 e.g. 2,300 and 2,500, 2,390 and 2,410, 1,400 and 3,400  
   b) Various possible answers as long as 2,400 is approximately $\frac{3}{4}$ of the way between e.g. 2,100 and 2,500, 2,370 and 2,410 |
1  The base 10 represents $2 \times 11$

$2 \times 11 = 22$

Use base 10 to work out $3 \times 11$

Draw your base 10 and complete the multiplication.

$3 \times 11 = 33$

2  Complete the calculations.

$5 \times 11 = 55$

$7 \times 11 = 77$

$9 \times 11 = 99$

$4 \times 11 = 44$

$6 \times 11 = 66$

$3 \times 11 = 33$

$10 \times 11 = 110$

$12 \times 11 = 132$

3  Rosie is spotting patterns in the 11 times-table.

When I add together the digits of each multiple of 11, I always get an even number.

$2 \times 11 = 22$

$2 + 2 = 4$ which is an even number

a) Do you agree with Rosie? Yes

Explain your answer.

b) What else do you notice?

What other patterns can you see in the 11 times-table?

Talk about it with a partner.

4  Crayons come in packs of 12

Dora buys 5 packs of crayons.

$\begin{array}{c}
\text{12} \\
\text{12} \\
\text{12} \\
\text{12} \\
\text{12}
\end{array}$

How many crayons does she have?

Dora has 60 crayons.
1. Alex is making arrays using counters.
   a) What calculation is represented in each array?
      \[1 \times 18 = 18\]
      \[2 \times 9 = 18\]
      \[3 \times 6 = 18\]
   b) Use your answers from part a) to help you write all the factors of 18
      \[1, 2, 3, 6, 9, 18\]

2. Use counters to make arrays and find the factor pairs for each number.
   a) 12 \[1 \times 12, \quad 2 \times 6, \quad 3 \times 4\]
      \[1, 2, 3, 4, 6, 12\]
   b) 15 \[1 \times 15, \quad 3 \times 5\]
      \[1, 3, 5, 15\]
   c) 24 \[1 \times 24, \quad 2 \times 12, \quad 3 \times 8, \quad 4 \times 6\]
      \[1, 2, 3, 4, 6, 12, 24\]

   Which of the numbers has the most factor pairs? 24

3. Complete the factor bugs for 45 and 64

4. Find all the factor pairs for the number 72

   The factor pairs of 72 are \[1, 72, \quad 2, 36, \quad 3, 24, \quad 4, 18, \quad 6, 12\]
5. Are these statements true or false?

- 8 and 2 are both factors of 10 [ ] True [ ] False
- 5 and 50 are both factors of 50 [ ] True [ ] False
- 25 has only three factors. [ ] True [ ] False
- All the factors of 15 are odd. [ ] True [ ] False

Talk about your answers with a partner.

6. The bigger the number the more factor pairs it has.

Use examples to show that Dexter is wrong.

Eg. 4 has 3 factors (1, 2, 4) and 5 only has 2 (1, 5)

7. Tommy is finding factors of 12 and 18

12 and 18 have the same number of factor pairs.

a) Is Tommy correct? [ ] Yes

Explain your answer.

They both have 3 factor pairs and so 6 factors.

8. Class 4B is having a sports day.
There are 36 children in the class.
The children need to be in equal groups.
What group sizes are possible?

Eg. 36 groups of 1, 18 groups of 2 etc.

9. Rosie is investigating factor pairs.

6 is a perfect number because when you add its factors together, apart from itself, they equal 6.

What is the next perfect number after 6?

28
7 Mr Scott is organising a cricket tournament.
   a) There are 11 players in a cricket team.
       5 teams have signed up for the tournament.
       How many players have signed up?

   b) Mr Scott needs 132 players signed up to go ahead with the tournament.
       How many more teams are needed?

5 Ron uses a bar model to represent 84 divided by 12

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</table>

a) Explain Ron’s mistake.
   He has split his bar into 12 sections and wrote 12 in each.

b) Draw the correct bar model diagram to represent 84 divided by 12

Amir is making pictures using shapes.
Here is one picture.

Amir makes 12 pictures like this one.

a) How many shapes does he use altogether?
   Show your working.

   144

b) If each picture is exactly the same, how many of each shape does Amir use?

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</thead>
<tbody>
<tr>
<td>24</td>
<td>24</td>
<td>60</td>
<td>36</td>
</tr>
</tbody>
</table>

8 Dexter has been looking at the 12 times-table.
He notices something when he adds the digits of the multiples of 12 together.

\[ 1 + 2 = 3 \]
\[ 2 + 4 = 6 \]
\[ 3 + 6 = 9 \]
\[ 4 + 8 = 12 \]

a) Dexter thinks the next number in the pattern will be 15
   Is he correct? __No__
   Explain your answer. __Yes__

b) What happens when he tries this for all the multiples of 12 up to 12 \( \times 12 \)?
   Is there a pattern?