White Rose Maths

1 Jack is working out 844 ÷ 4 using a place value chart.

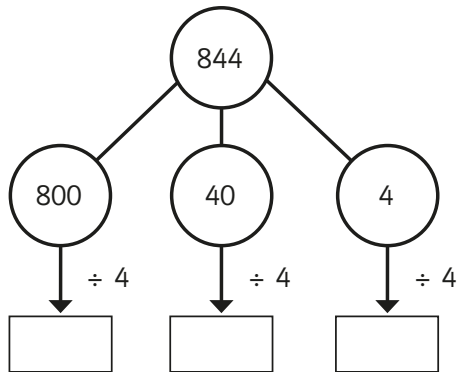| H	T	O
100 100	10	1
100 100	10	1
100 100	10	1
100 100	10	1

a) Talk about Jack's method with a partner.

b) Work out the division.

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

a) 525 ÷ 5   **b)** 636 ÷ 6   **c)** 840 ÷ 8   **d)** 903 ÷ 3

3 Eva is working out 844 ÷ 4 using a part-whole model.

```
        844
    /    |    \
  800    40    4
   |     |     |
  ÷ 4   ÷ 4   ÷ 4
   |     |     |
  [  ]  [  ]  [  ]
```
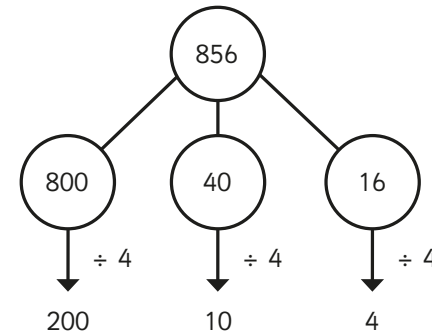
Complete Eva's method.   844 ÷ 4 = [   ]

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?

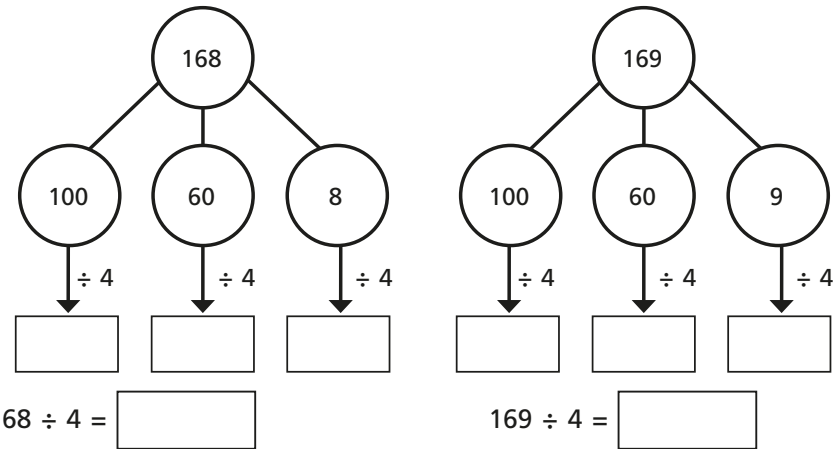**5** Whitney is using flexible partitioning to divide a 3-digit number.

```
           856
       /    |    \
     800    40    16
      |     |     |
     ÷ 4   ÷ 4   ÷ 4
      |     |     |
     200    10    4
```

Could Whitney have partitioned her number another way?

Use Whitney's method to work out these divisions.

a) 585 ÷ 5   **b)** 672 ÷ 6   **c)** 648 ÷ 4   **d)** 847 ÷ 7

6 Complete the part-whole models and divisions.

```
        168                        169
    /    |    \              /    |    \
  100    60    8          100    60    9
   |     |     |           |     |     |
  ÷ 4   ÷ 4   ÷ 4        ÷ 4   ÷ 4   ÷ 4
   |     |     |           |     |     |
  [  ]  [  ]  [  ]       [  ]  [  ]  [  ]
```

168 ÷ 4 = [   ]   169 ÷ 4 = [   ]

What is the same and what is different about the calculations?

Talk about it with a partner.

5 Whitney is using flexible partitioning to divide a 3-digit number.
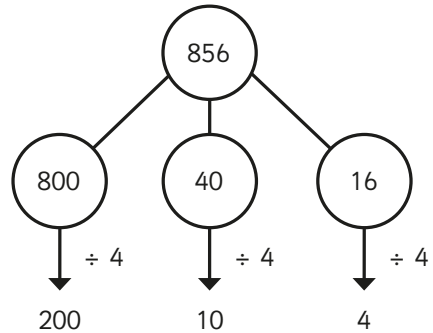
```
              856
        /      |      \
      800     40      16
       |       |       |
      ÷ 4     ÷ 4     ÷ 4
       ↓       ↓       ↓
      200     10       4
```

Could Whitney have partitioned her number another way?

Use Whitney's method to work out these divisions.
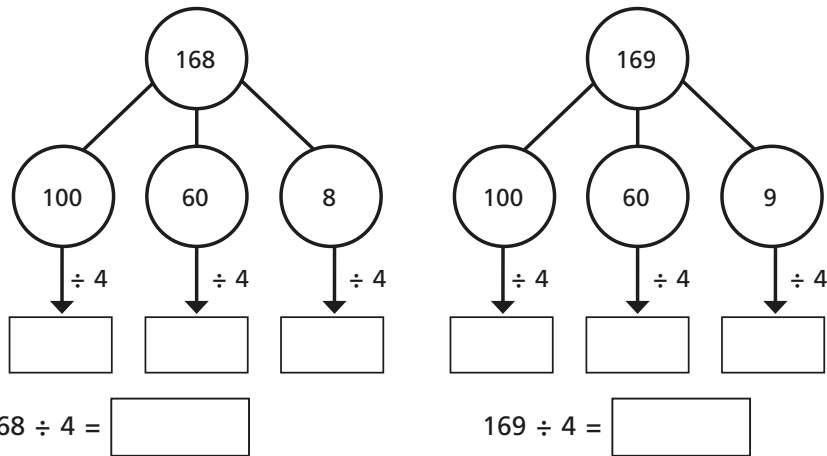
a) 585 ÷ 5   **b)** 672 ÷ 6   **c)** 648 ÷ 4   **d)** 847 ÷ 7

6 Complete the part-whole models and divisions.

```
          168                        169
       /   |   \                   /   |   \
     100  60    8                100   60    9
      |    |    |                 |    |    |
     ÷ 4  ÷ 4  ÷ 4               ÷ 4  ÷ 4  ÷ 4
      ↓    ↓    ↓                 ↓    ↓    ↓
   [   ][   ][   ]             [   ][   ][   ]
```

168 ÷ 4 = [   ]   169 ÷ 4 = [   ]

What is the same and what is different about the calculations?

Talk about it with a partner.

7 Work out the divisions.

a) 258 ÷ 6   **b)** 623 ÷ 5   **c)** 864 ÷ 4   **d)** 824 ÷ 3

8 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.

9 Use 15 counters and a place value chart.

a) Can you make a number that is divisible by 3?   _____

b) Can you make a number that has a remainder
of 1 when divided by 3?   _____

c) Can you make a number that has a remainder
of 2 when divided by 3?   _____

What do you notice? Talk about your findings with a partner.