Tricky

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

Complete the division.

844 ÷ 4 = ☐

A ball of string is 848 cm long.

It is cut into 4 equal pieces.

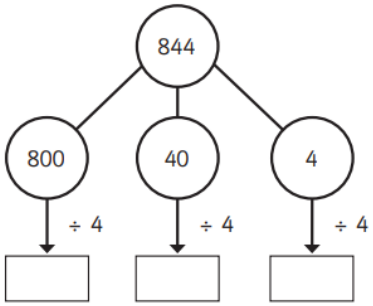
What is the length of one piece of string?

Use Jack's method to work out these divisions.

a) 525 ÷ 5 = ☐ c) 840 ÷ 8 = ☐

b) 636 ÷ 6 = ☐ d) 903 ÷ 3 = ☐

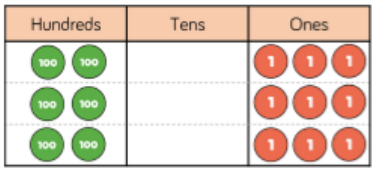
Eva is working out 844 ÷ 4 using a part-whole model.

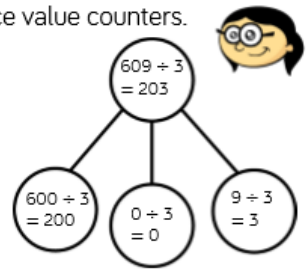


Complete Eva's method. 844 ÷ 4 = ☐

Trickier

Annie is dividing 609 by 3 using place value counters.

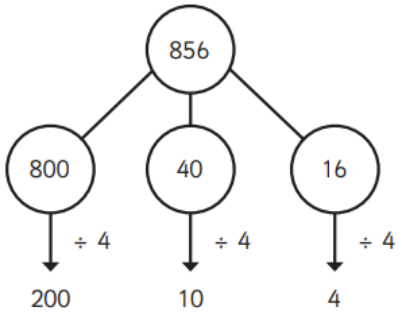




Use Annie's method to calculate the divisions.

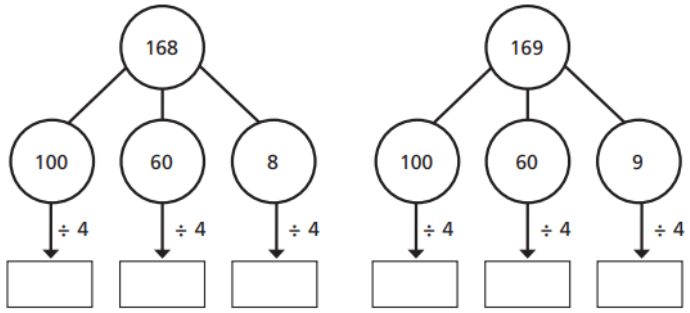
906 ÷ 3 884 ÷ 4 884 ÷ 8 489 ÷ 2

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



Could Whitney have partitioned her number another way?

6 Complete the part-whole models and divisions.



168 ÷ 4 = ☐ 169 ÷ 4 = ☐

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

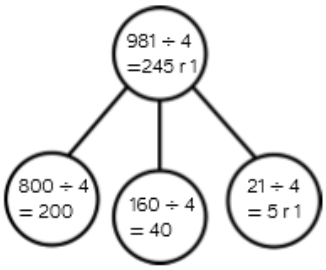
Use Whitney's method to work out these divisions.

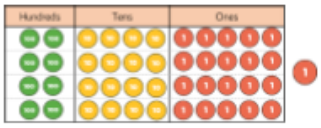
a) 585 ÷ 5 = ☐ c) 648 ÷ 4 = ☐

b) 672 ÷ 6 = ☐ d) 847 ÷ 7 = ☐

Trickiest – Complete the Whitney questions in Trickier before moving on to the rest of the challenges below

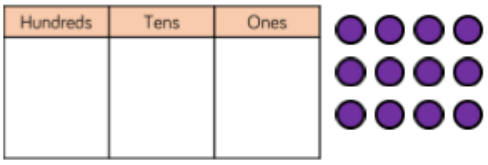
Rosie is using flexible partitioning to divide 3-digit numbers.
She uses her place value counters to support her.





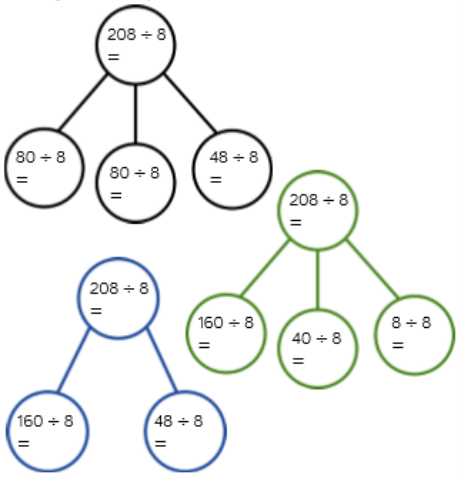
Use Rosie's method to solve:
726 ÷ 6
846 ÷ 6
846 ÷ 7

You have 12 counters and the place value grid. You must use all 12 counters to complete the following.



Create a 3-digit number divisible by 2
Create a 3-digit number divisible by 3
Create a 3-digit number divisible by 4
Create a 3-digit number divisible by 5
Can you find a 3-digit number divisible by 6, 7, 8 or 9?

Dexter is calculating 208 ÷ 8 using part-whole models.
Can you complete each model?



How many part-whole models can you make to calculate 132 ÷ 4?

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

:) 8 equal pieces

Can Eva cut the ribbon into equal pieces with no ribbon left over?

Explain your answer.

Answers

Tricky

Use Jack's method to work out these divisions.

a) 525 ÷ 5 = 105

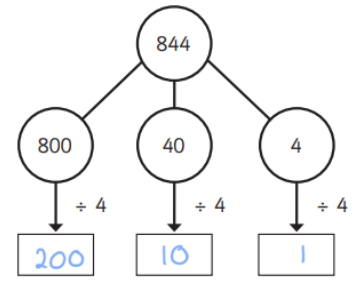
c) 840 ÷ 8 = 105

b) 636 ÷ 6 = 106

d) 903 ÷ 3 = 301

Complete the division.

844 ÷ 4 = 211



's method.

844 ÷ 4 = 211

What is the length of one piece of string?

212cm

Trickier

Use Whitney's method to work out these divisions.

a) 585 ÷ 5 = 117

c) 648 ÷ 4 = 162

b) 672 ÷ 6 = 112

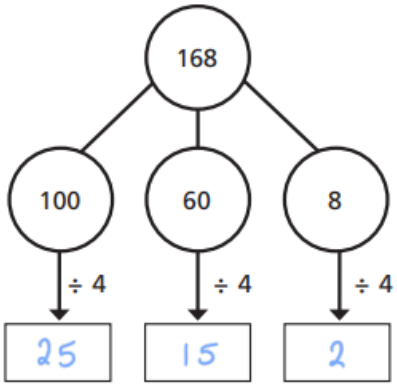
d) 847 ÷ 7 = 121

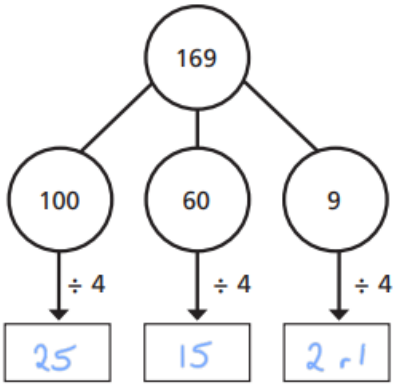
906 ÷ 3 = 302

884 ÷4 = 221

884 ÷ 8 = 110 r4

489 ÷ 2 = 244 r1





168 ÷ 4 = 42

169 ÷ 4 = 42 r1

Trickiest

726 ÷ 6 = 121

846 ÷ 6 = 141

846 ÷ 7 = 120 r6

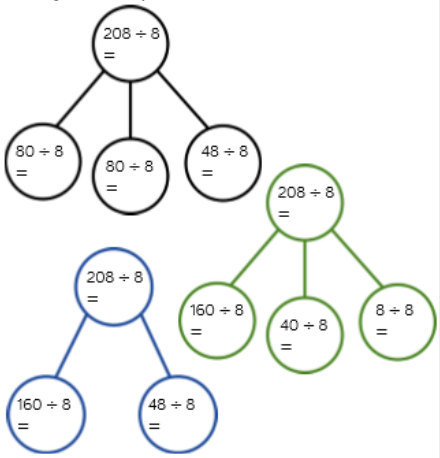
4 equal pieces – 3cm

6 equal pieces – 5cm

8 equal pieces – 7 cm

Can cut ribbon into equal pieces as 839 pieces each 1 cm long

Dexter is calculating 208 ÷ 8 using part-whole models.
Can you complete each model?

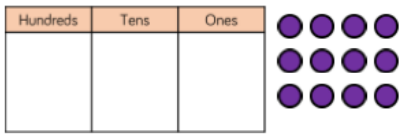


How many part-whole models can you make to calculate 132 ÷ 4?

208 ÷ 8 = 26
80 ÷ 8 = 10
48 ÷ 8 = 6
160 ÷ 8 = 20
40 ÷ 8 = 5
8 ÷ 8 = 1

Children can then make a range of part-whole models to calculate 132 ÷ 4
e.g.
100 ÷ 4 = 25
32 ÷ 4 = 8

You have 12 counters and the place value grid. You must use all 12 counters to complete the following.



Create a 3-digit number divisible by 2
Create a 3-digit number divisible by 3
Create a 3-digit number divisible by 4
Create a 3-digit number divisible by 5
Can you find a 3-digit number divisible by 6, 7, 8 or 9?

2: Any even number

3: Any 3-digit number (as the digits add up to 12, a multiple of 3)

4: A number where the last two digits are a multiple of 4

5: Any number with 0 or 5 in the ones column.

Possible answers

6: Any even number

7: 714, 8: 840

9: Impossible