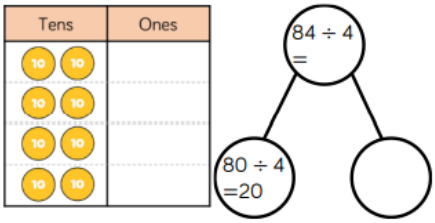
08.11.2021

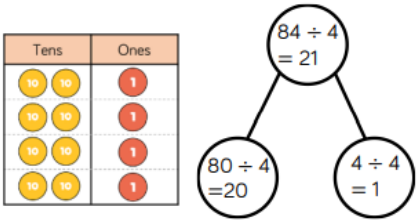
Divide 2-digit numbers by 1-digit numbers using partitioning and representations

Jack is dividing 84 by 4 using place value counters.

First, he divides the tens.



Then, he divides the ones.

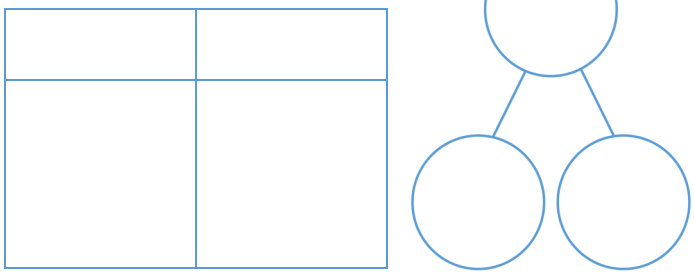


Use Jack's method to calculate:

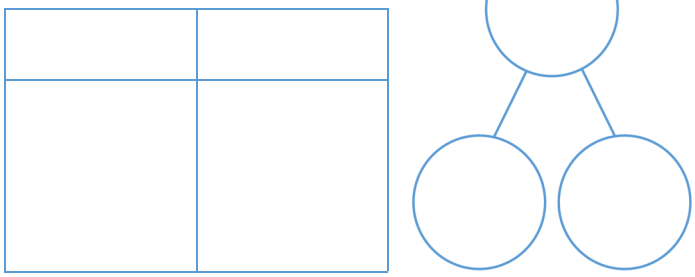
69 ÷ 3 88 ÷ 4 96 ÷ 3

1) _____

First...

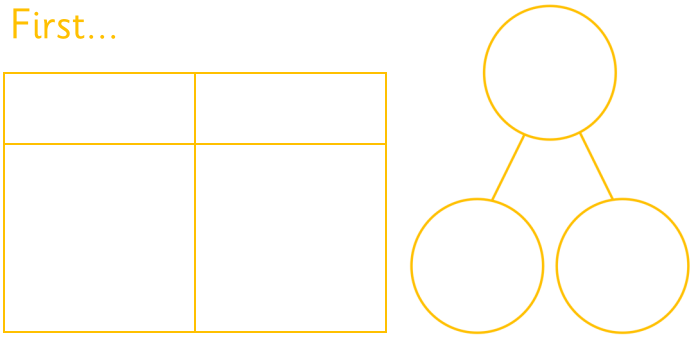


Then...

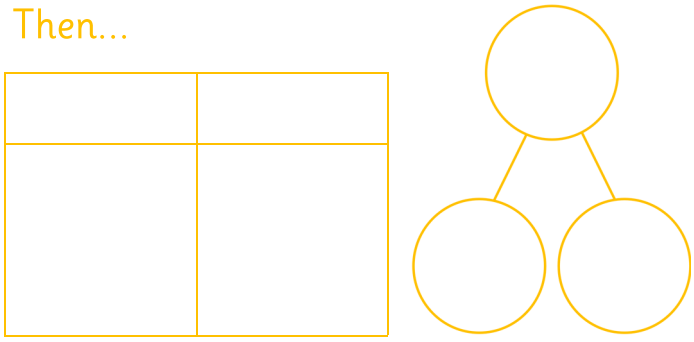


2) _____

First...

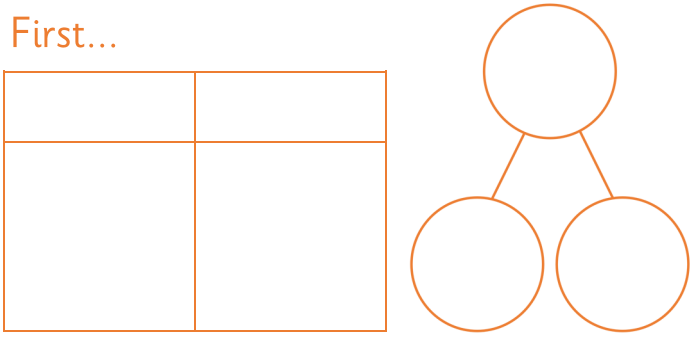


Then...

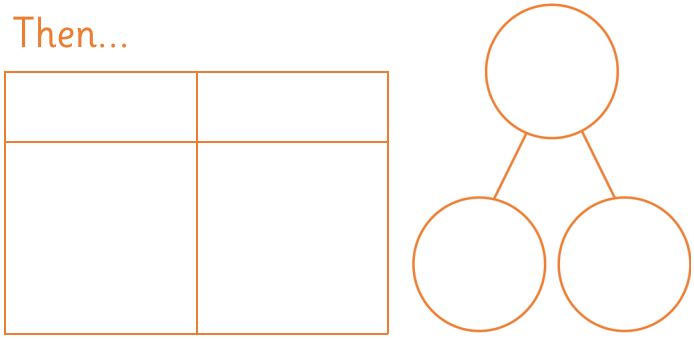


3) _____

First...



Then...

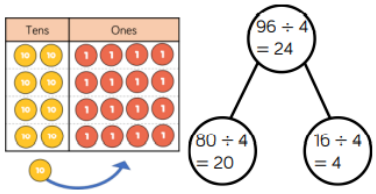


08.11.2021

Challenge

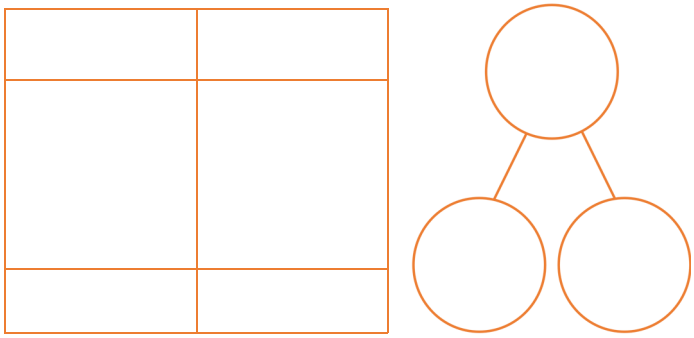
Divide 2-digit numbers by 1-digit numbers using partitioning and representations

Rosie is calculating 96 divided by 4 using place value counters.
First, she divides the tens. She has one ten remaining so she exchanges one ten for ten ones. Then, she divides the ones.

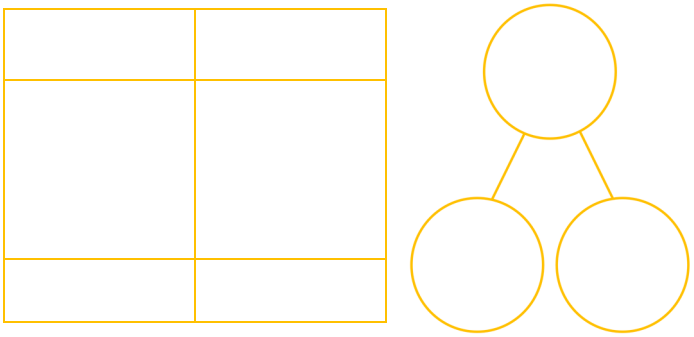


Use Rosie's method to solve
65 ÷ 5
75 ÷ 5
84 ÷ 6

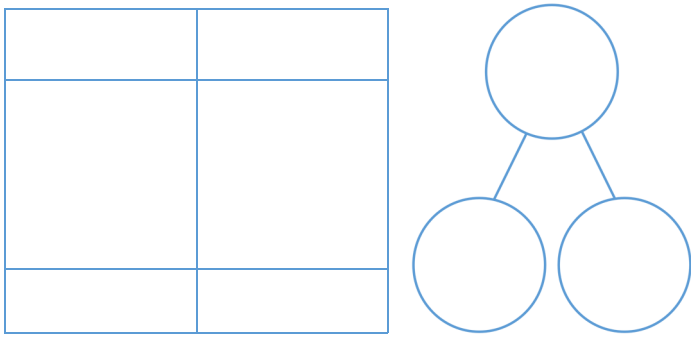
1) _____



2) _____



3) _____



Use <, > or = to complete the statements.

69 ÷ 3 ◯ 96 ÷ 3

96 ÷ 4 ◯ 96 ÷ 3

91 ÷ 7 ◯ 84 ÷ 6

Dora is calculating 72 ÷ 3
Before she starts, she says the calculation will involve an exchange.

Do you agree? _____
Explain why. _____
_____
_____

Eva has 96 sweets.
She shares them into equal groups.
She has no sweets left over.
How many groups could Eva have shared her sweets into?

Additional Practise 1

08.11.2021

Teddy is dividing 85 by 4 using place value counters.

First, he divides the tens.

Tens	Ones
10 10	
10 10	
10 10	
10 10	

85 ÷ 4 =

80 ÷ 4 =20

Then, he divides the ones.

Tens	Ones
10 10	1
10 10	1
10 10	1
10 10	1

1

85 ÷ 4 = 21 r1

80 ÷ 4 =20

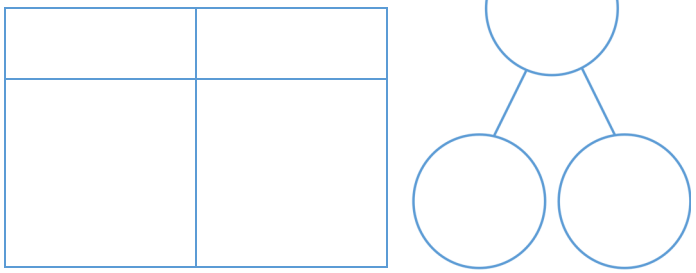
5 ÷ 4 = 1 r1

Use Teddy's method to calculate:

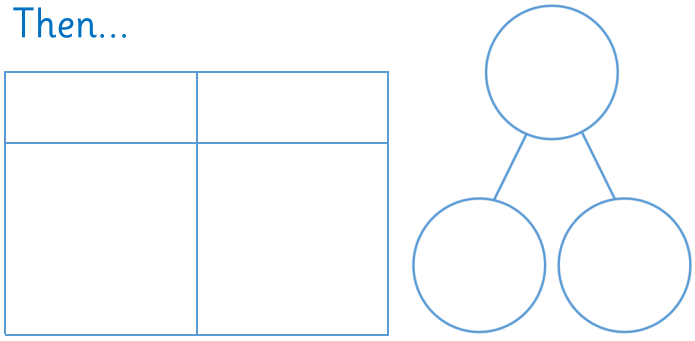
86 ÷ 4 87 ÷ 4 88 ÷ 4 97 ÷ 3 98 ÷ 3 99 ÷ 3

1) _____

First...

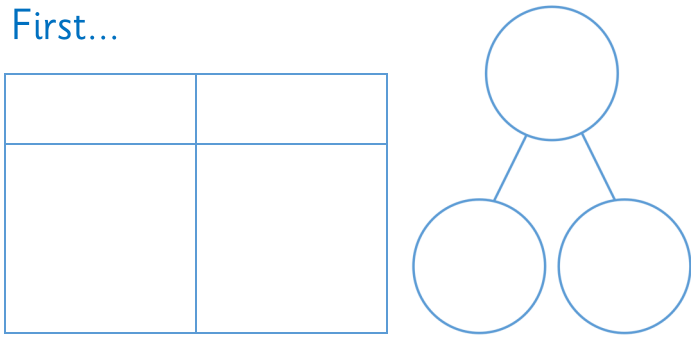


Then...

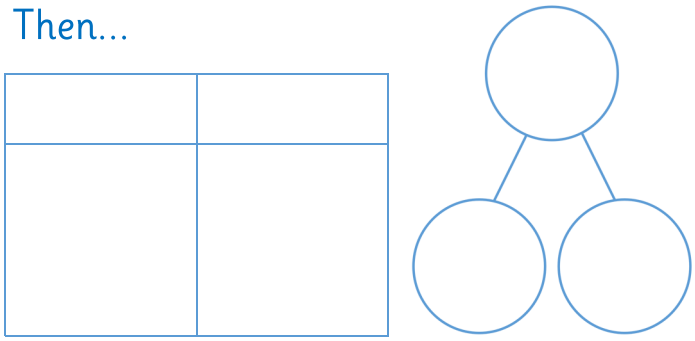


2) _____

First...



Then...

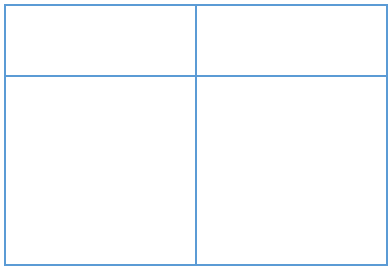


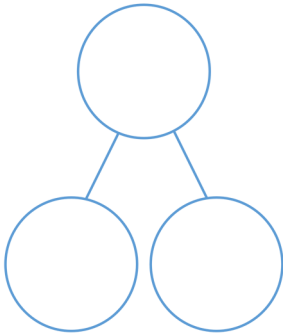
Additional Practise 2

08.11.2021

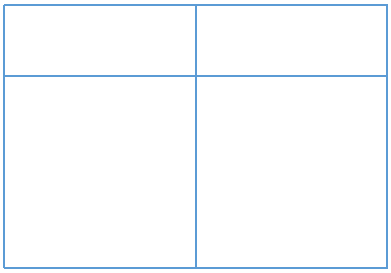
3) _____

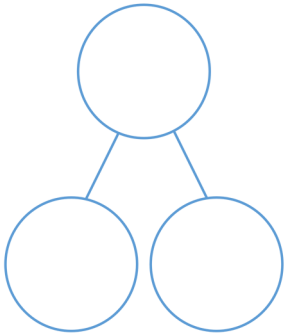
First...





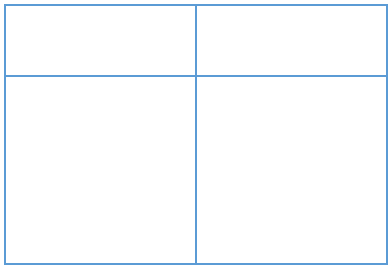
Then...

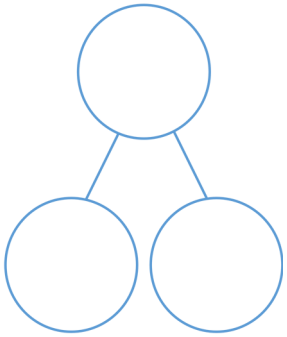




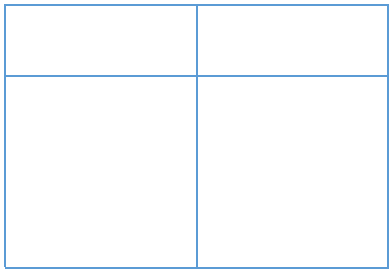
4) _____

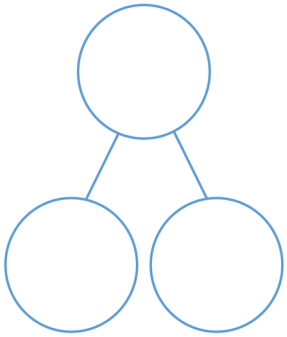
First...





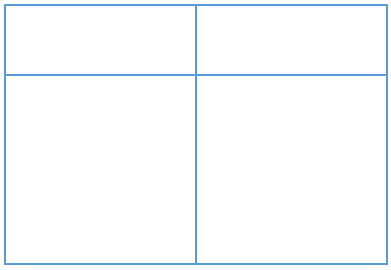
Then...

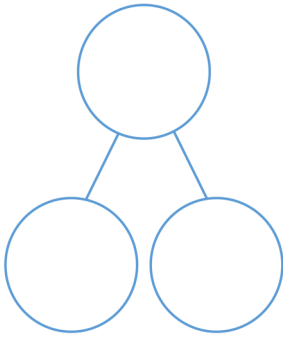




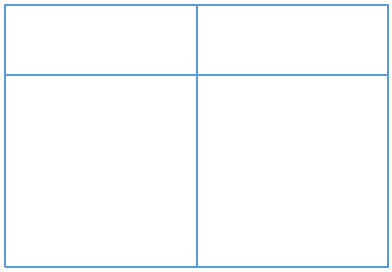
5) _____

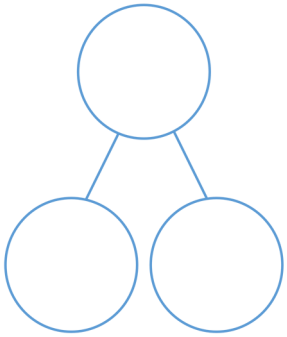
First...





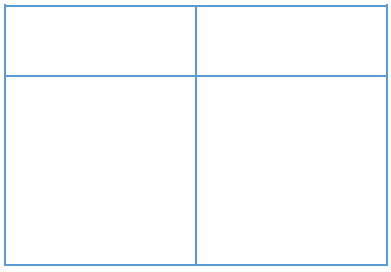
Then...

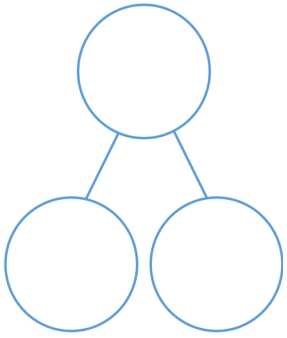




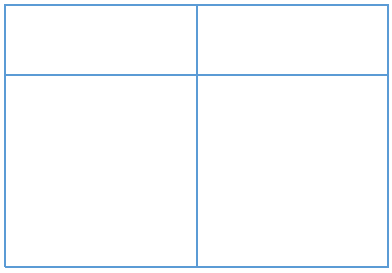
6) _____

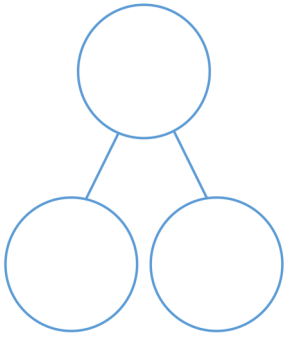
First...





Then...

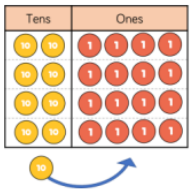


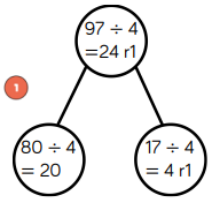


Additional Practise 3

08.11.2021

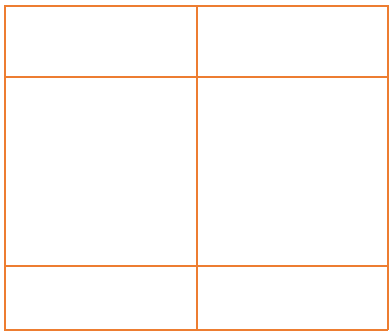
Whitney uses the same method, but some of her calculations involve an exchange.

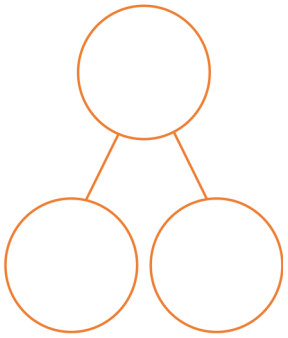




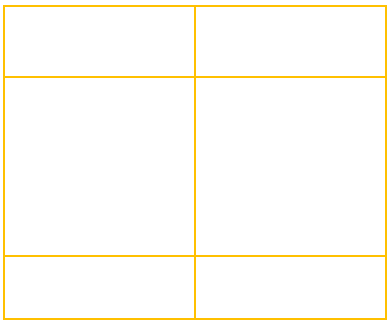
Use Whitney's method to solve
57 ÷ 4
58 ÷ 4
58 ÷ 3

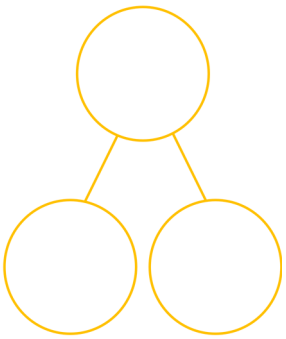
1)



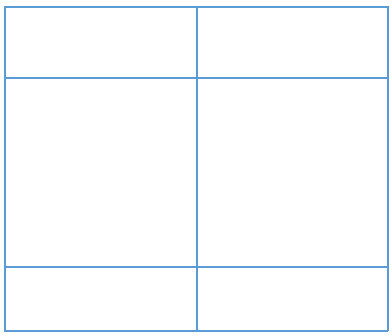


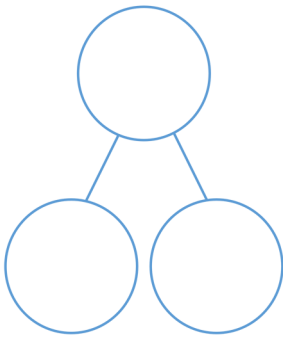
2) _____





3) _____





Rosie writes,
85 ÷ 3 = 28 r 1

She says 85 must be 1 away from a multiple of 3
Do you agree?

37 sweets are shared between 4 friends.
How many sweets are left over?

Four children attempt to solve this problem.

- Alex says it's 1
- Mo says it's 9
- Eva says it's 9 r 1
- Jack says it's 8 r 5

Can you explain who is correct and the mistakes other people have made?

09.11.2021

Divide 2-digit numbers by 1-digit numbers using short and expanded multiplication

78 ÷ 3

7 tens ÷ 3 = ___ tens r 1 ten

1 tens + 8 ones = 18 ones

18 ones ÷ 3 = ___ ones

so

78 ÷ 3 = ☐

82 ÷ 5

8 tens ÷ 5 = ___ tens r ___ tens

3 tens + 2 ones = 32 ones

32 ones ÷ 5 = ___ ones r ___ ones

so

82 ÷ 5 = ☐ r ☐

82 ÷ 4 = ☐

92 ÷ 4 = ☐

94 ÷ 4 = ☐

96 ÷ 4 = ☐

'Write these as short-division calculations.'

69 ÷ 3 39 ÷ 3 93 ÷ 3 66 ÷ 3

'Complete the calculations.'

2) 8 6	3) 6 3	4) 8 8
3) 4 8	4) 5 6	4) 7 2
3) 6 4	4) 7 9	5) 6 7

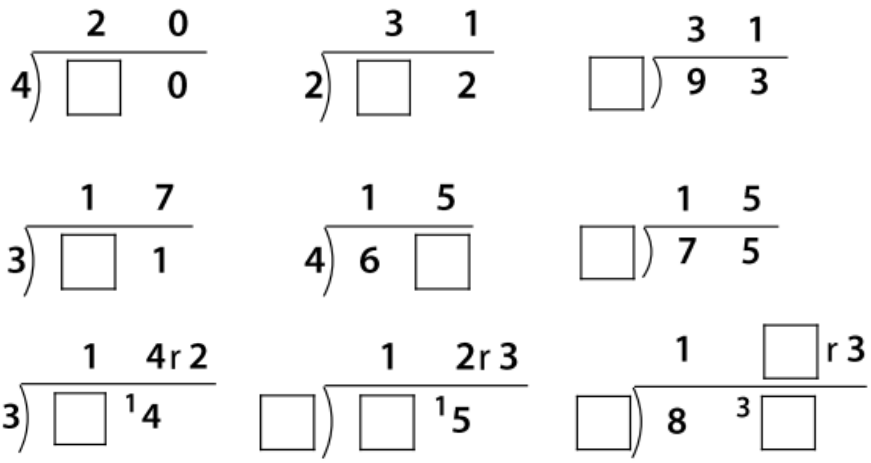
'Draw a line to match each division expression with the correct addition expression.'

96 ÷ 3	10 + 9 r 1
96 ÷ 4	30 + 2
96 ÷ 5	20 + 4

09.11.2021 **Challenge**

Divide 2-digit numbers by 1-digit numbers using short and expanded multiplication

'Fill in the missing digits.'



Calculations

'Year 4 made seventy-two biscuits to sell at the summer fête. They want to sell the biscuits in bags. Each bag must contain the same number of biscuits. Work out how many bags they need depending on how many biscuits they put in each bag.'

Total number of biscuits: 72

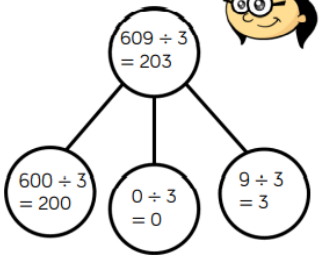
Number of biscuits in each bag	Calculation	Number of bags needed
2		
3		
4		
5		
6		
7		
8		

10.11.2021

Divide 3-digit numbers by 1-digit numbers using partitioning and representations

Annie is dividing 609 by 3 using place value counters.

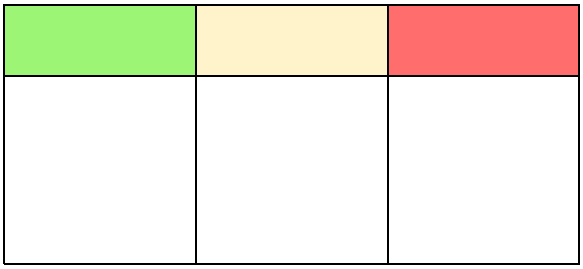
Hundreds	Tens	Ones
100 100		1 1 1
100 100		1 1 1
100 100		1 1 1

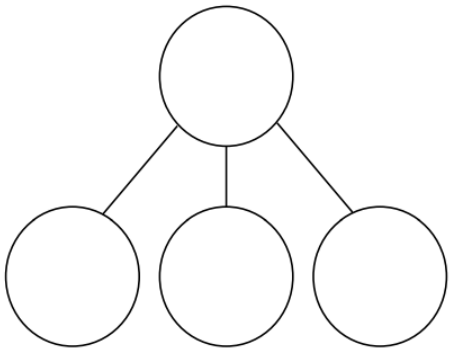


Use Annie's method to calculate the divisions.

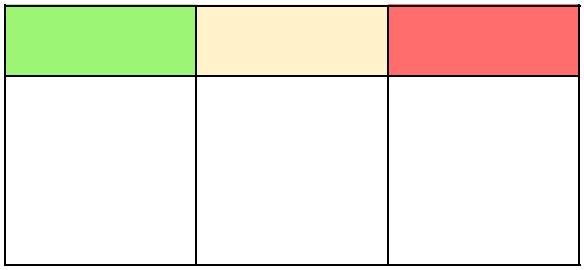
906 ÷ 3 884 ÷ 4 884 ÷ 8 489 ÷ 2

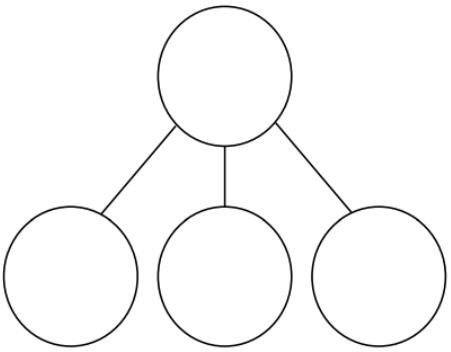
1) _____



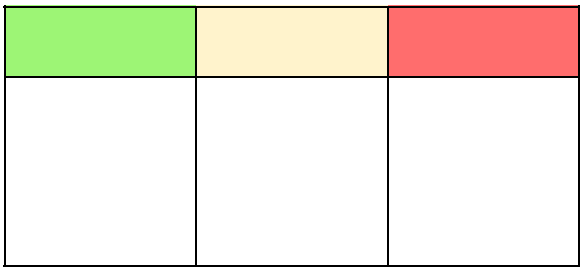


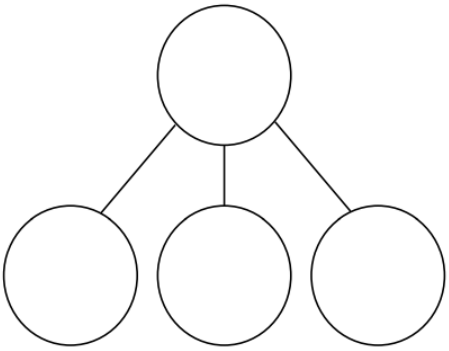
2) _____



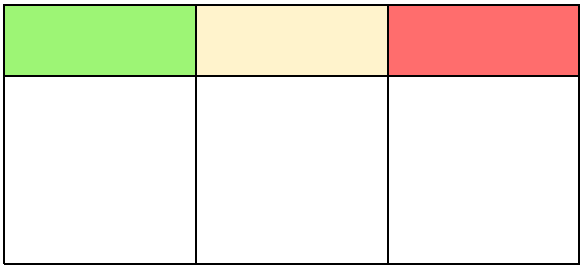


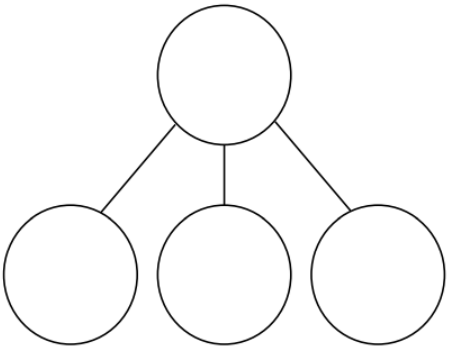
3) _____





4 _____

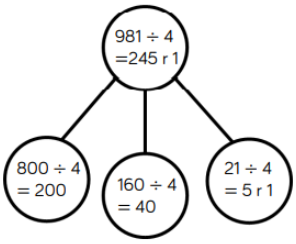




Additional Practise 4

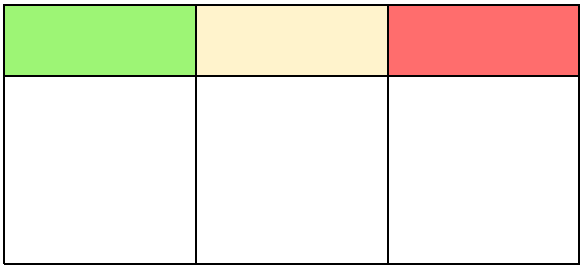
10.11.2021

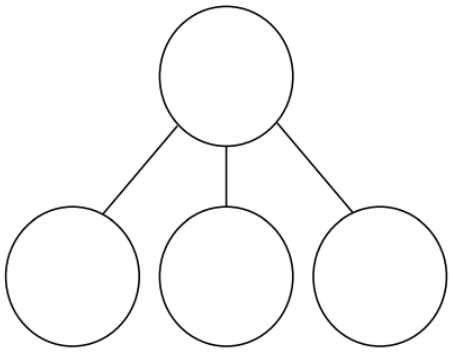
Rosie is using flexible partitioning to divide 3-digit numbers.
She uses her place value counters to support her.



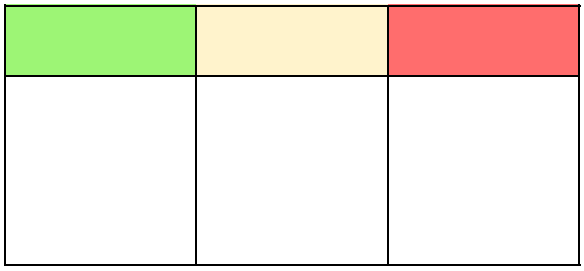
Use Rosie's method to solve:
726 ÷ 6
846 ÷ 6
846 ÷ 7

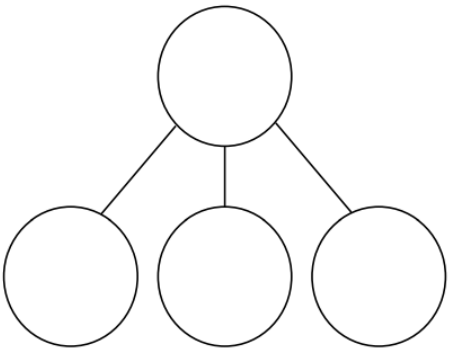
1) _____



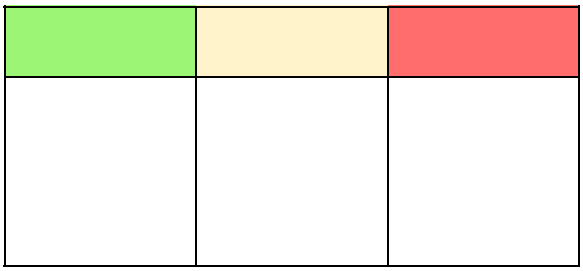


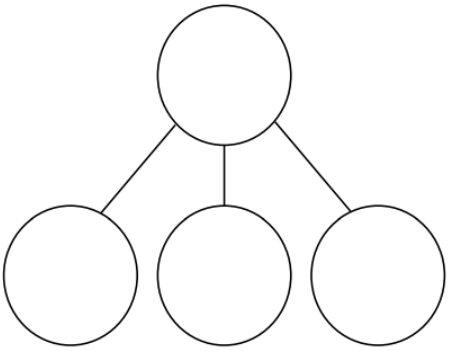
2) _____



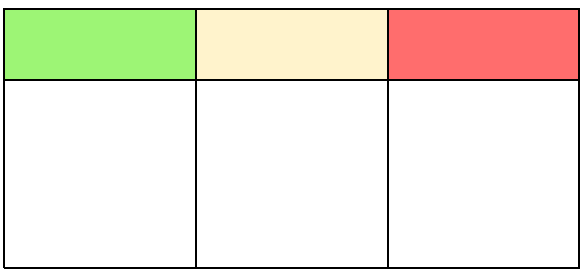


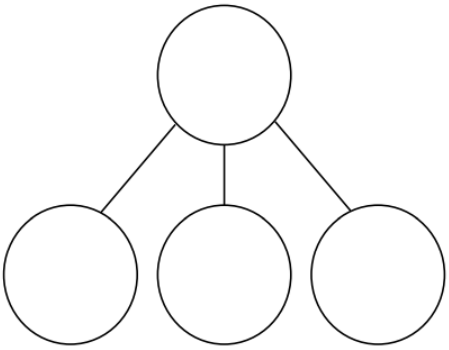
3) _____





4 _____



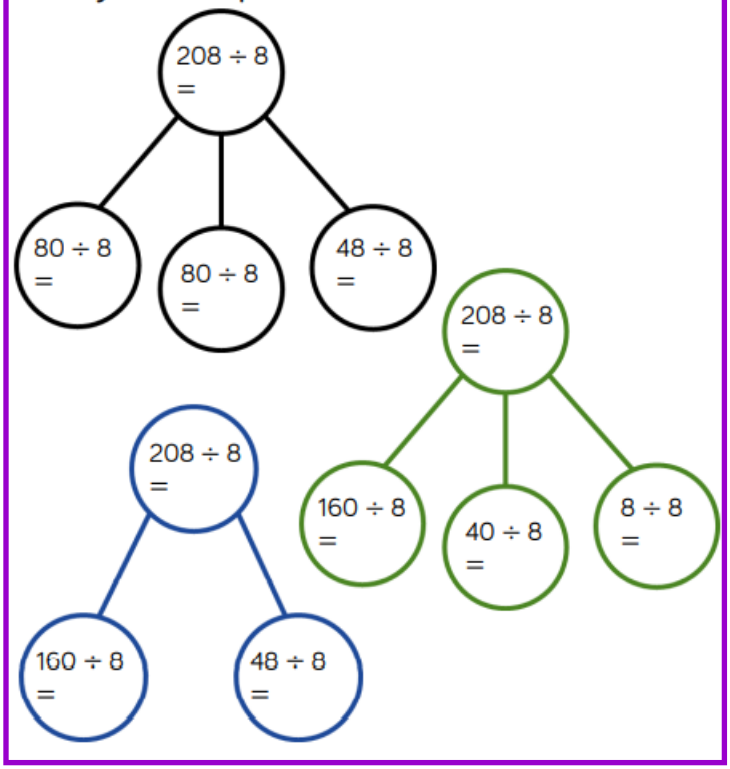


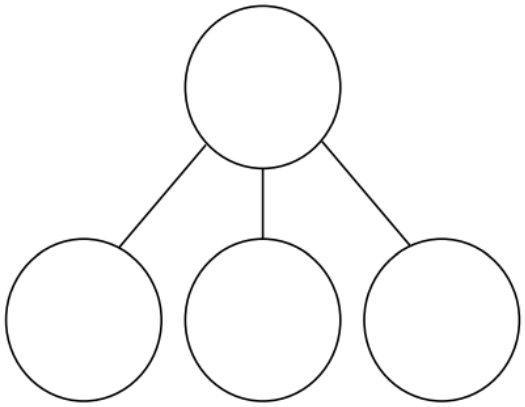
10.11.2021

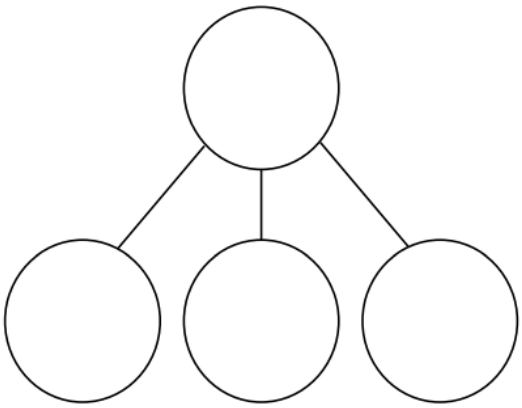
Challenge

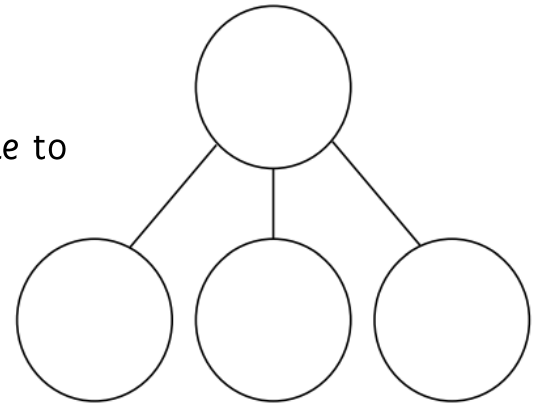
Divide 3-digit numbers by 1-digit numbers using partitioning and representations

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





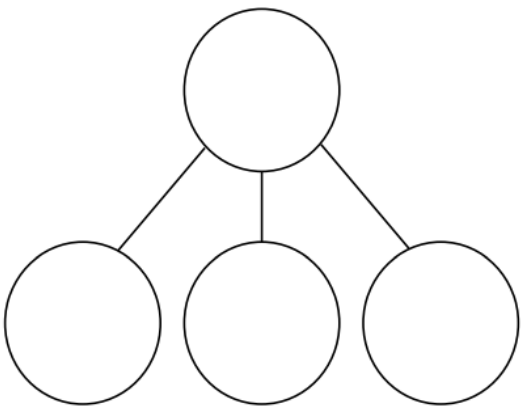


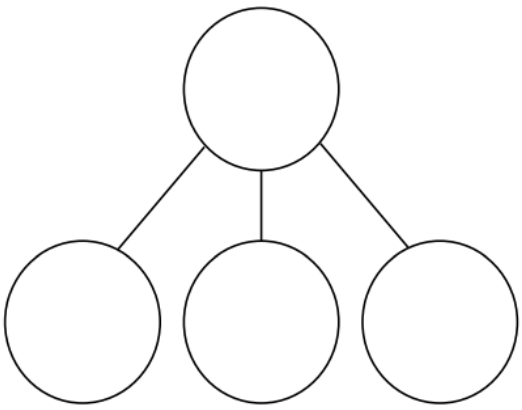


How many part-whole models can you make to calculate:

132 ÷ 4?

Continue journaling in your book.





11.11.2021

Divide 3-digit numbers by 1-digit numbers using short and expanded multiplication

$2\overline{)464}$ $3\overline{)396}$ $5\overline{)550}$ $9\overline{)645}$

$2\overline{)546}$ $3\overline{)846}$ $4\overline{)728}$ $8\overline{)600}$

$4\overline{)486}$ $5\overline{)857}$ $6\overline{)684}$ $7\overline{)423}$

'Fill in the missing digits.'

$4\overline{)\square 80}$ $\quad 120$

$\square\overline{)6\square 3}$ $\quad 201$

$5\overline{)\square\,{}^{3}\square\,{}^{1}5}$ $\quad 163$

$5\overline{)\square 05}$ $\quad 161$

$\square\overline{)906}$ $\quad 151$

$\square\overline{)7\,{}^{1}28}$ $\quad 242r2$

'Fill in the missing numbers in the table.'

Dividend	Divisor	Quotient
242		121
	3	121
484		121
	5	121

Reasoning problems:

- *'What digits could the diamond (◊) represent if the following calculation has a whole number quotient?'*

  $7\overline{)32\lozenge}$

- *'What digits could the diamond (◊) represent if the following calculation has a quotient with a remainder of three?'*

  $6\overline{)33\lozenge}$

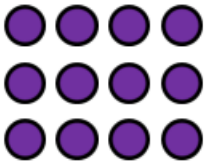
11.11.2021

Challenge

Divide 3-digit numbers by 1-digit numbers using short and expanded multiplication

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

Hundreds	Tens	Ones



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?

1) _____

2) _____

3) _____

4) _____

5) _____