Monday
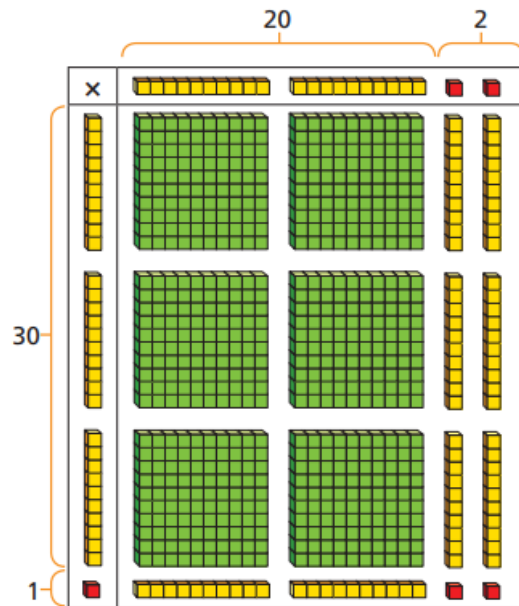
Multiply 2-digits (area model)

1 Kim is using base 10 to work out 31 × 22

Use Kim's model to help you complete the sentences.

There are ⬚ ones altogether.

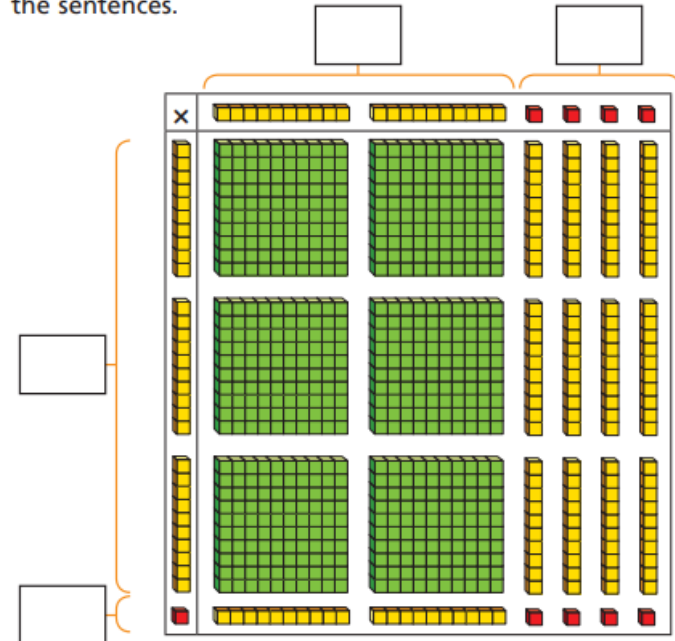There are ⬚ tens altogether.

There are ⬚ hundreds altogether.

31 × 22 = ⬚

2 Use base 10 to work out the multiplications.

a) 12 × 14 = ⬚   **b)** 23 × 13 = ⬚

3 Amir is using base 10 to calculate 31 × 24

a) Add the missing information to the area model and complete the sentences.

There are ⬚ ones altogether.

There are ⬚ tens altogether.

There are ⬚ hundreds altogether.

b) Describe any exchanges you need to make.

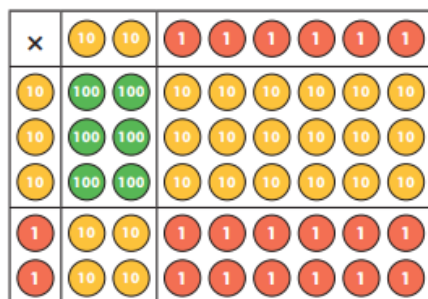_____

_____

c) Complete the multiplication.

31 × 24 = ⬚

4 Use base 10 to work out these multiplications.

a) 25 × 15 = ⬚   **b)** 36 × 12 = ⬚

5 Use the place value counters to complete the multiplication grid and sentence.

×	20	6
30		
2		

26 × 32 = ☐

6 Use an area model to help you complete the multiplication.

a) 28 × 14 = ☐

×	20	8
10		
4		

c) 35 × 22 = ☐

b) 27 × 16 = ☐

×		

d) 45 × 36 = ☐

7 Complete the multiplications.

21 × 24 = ☐

31 × 25 = ☐

18 × 26 = ☐

8 24 × ☐ = 768

Complete the area model to find the missing number.

×	

9 Use each digit card once to write a multiplication.

| 2 | 3 | 4 | 5 |

☐ × ☐ = ☐

How many different answers can you find?

_____

_____

How many products are there between 1,000 and 1,500?

Tuesday

Multiply 4-digits by 2-digits

1 Complete the multiplication.

$$
\begin{array}{r}
1\ 2\ 3\ 4 \\
\times \qquad 2\ 1 \\
\hline
1\ 2\ 3\ 4 \\
2\ 4\ 6\ 8\ 0 \\
\hline

\end{array}
$$

(1,234 × ☐)

(1,234 × ☐)

2 Tommy is calculating 1,234 × 26

a) Complete his working out.

$$
\begin{array}{r}
1\ 2\ 3\ 4 \\
\times \qquad 2\ 6 \\
\hline
7_1\ 4_2\ 0_2\ 4 \\
2\ 4\ 6\ 8\ 0 \\
\hline

\end{array}
$$

(☐ × ☐)

(☐ × ☐)

b) Fill in the grid to check Tommy's working is accurate. You may use place value counters to help.

×	1,000	200	30	4
20				
6				

3 Rosie is calculating 2,541 × 42

Here is Rosie's working.

$$
\begin{array}{r}
2\ 5\ 4\ 1 \\
\times \qquad 4\ 2 \\
\hline
4_1\ 0\ 8\ 2 \quad (2{,}541 \times 2) \\
8_2\ 0_1\ 6\ 4 \quad (2{,}541 \times 40) \\
\hline
1_1\ 2\ 1_1\ 4\ 6
\end{array}
$$

a) Rosie has made two mistakes. What are they?

_____

_____

b) What is the correct answer?

☐

4 Work out the multiplications.

a) 4,284 × 23   **b)** 2,142 × 46

What do you notice?

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5 A machine makes 2,734 boxes every hour.

The machine works for 3 hours each day.

a) How many boxes will it make in 12 days?

[ ]

b) Compare methods with a partner. Were there any other ways you could have worked out the answer?

6 Work out 378 × 7 × 12

Show your method clearly.

[ ]

7

| 1 | 2 | 3 | 4 | 5 | 6 |

[ ][ ][ ][ ]

× [ ][ ]
_____

a) Using all the digit cards, create 4 different calculations and work out the answer to each.

b) Write your answers in ascending order.

_____

c) What is the smallest product that can be made? [ ]

8 Amir scores 4,680 points in a computer game for 12 games in a row.

Whitney scores 2,512 points every game for 24 games.

Who scores more points? _____

How many more? [ ]

Wednesday

Divide with remainders

1 a) Circle the groups of 3 to help complete the sentences and calculation.

The first step has been done for you.

Th	H	T	O

	1			
3	3	9	3	8

There is ☐1☐ group of 3 thousands.

There are ☐ groups of 3 hundreds.

There is ☐ group of 3 tens.

There are ☐ groups of 3 ones.

There are ☐ ones left over.

$3,938 \div 3 =$ ☐ remainder ☐

b) Use place value counters to work out $8,407 \div 4$

Th	H	T	O

		4	8	4	0	7

$8,407 \div 4 =$ ☐ remainder ☐

2 a) Complete the divisions.

Use place value counters to help you.

	3	7	5	9	5

	4	8	5	6	7

	5	6	5	6	2

	3	3	9	3	5

b) Write <, > or = to complete the statements.

$7,595 \div 3$ ◯ $8,567 \div 4$

$6,562 \div 5$ ◯ $3,935 \div 3$

3 Write the calculations in the correct column of the table.

| 5,066 ÷ 4 | 9,513 ÷ 4 | 1,234 ÷ 4 |

| 6,562 ÷ 4 | 6,563 ÷ 4 | 9,515 ÷ 4 |

Remainder of 1	Remainder of 2	Remainder of 3	Remainder of 4

Are any columns empty? Talk to a partner about why this has happened.

4

| 7,816 | 7,861 | 6,781 | 1,786 |

I know that if I divide these numbers by 5 the remainder will be 1

Is Eva correct? _____

How do you know?

5 There are 459 children in a school.

They are sitting at tables in groups of 7

We will need 65 tables.

Do you agree with Mo? _____

Explain your answer.

6 Bags of crisps are put into multipacks of 6

The multipacks are then packed into boxes of 8

Yesterday, 6,500 bags of crisps were packed.

How many boxes of crisps were packed?

7

| 2 | 3 | 4 | 5 |

| ☐ | ☐ | ☐ | ÷ | ☐ |

a) How many ways can you complete the calculation using all the digit cards so that there is a remainder of 1?
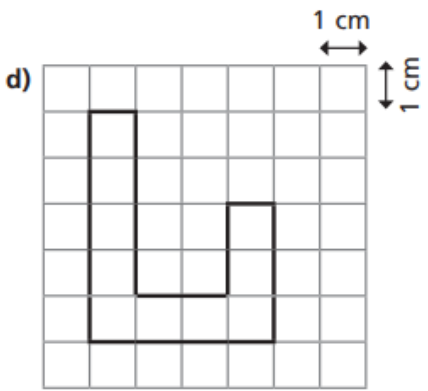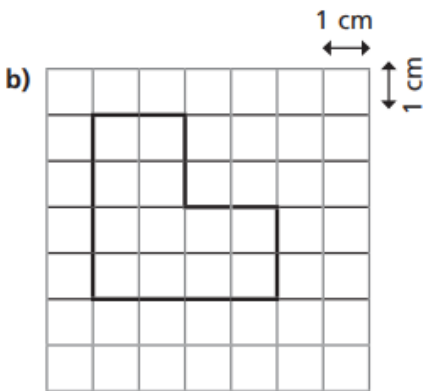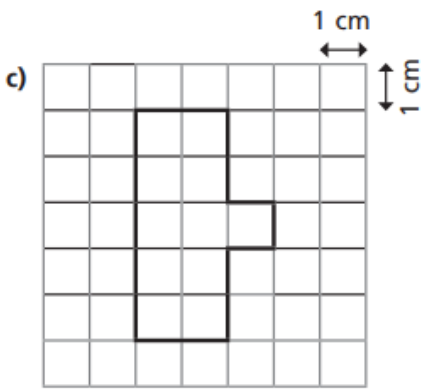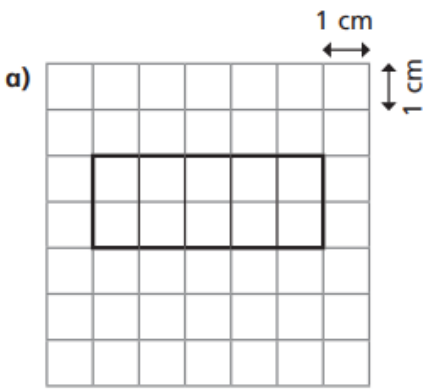
b) What do you notice?

8 Dora is thinking of a number between 500 and 600

When she divides it by a 1-digit number it has a remainder of 4
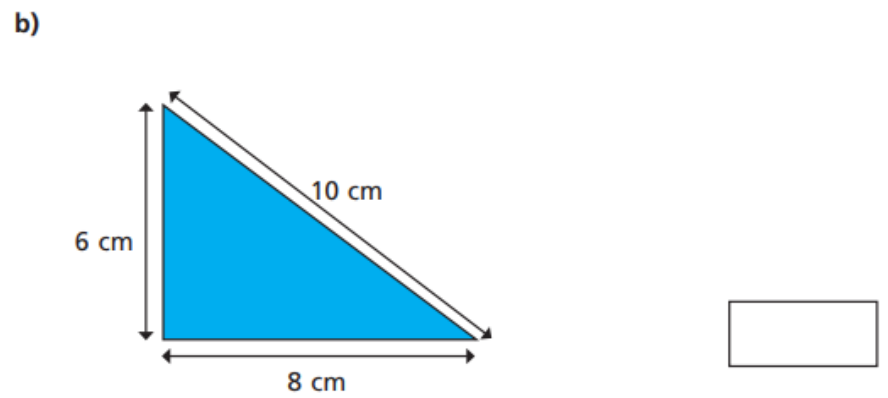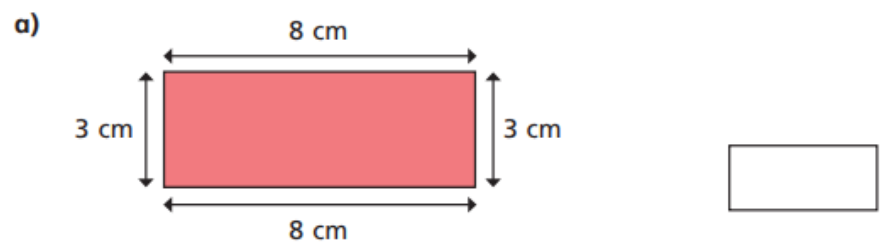
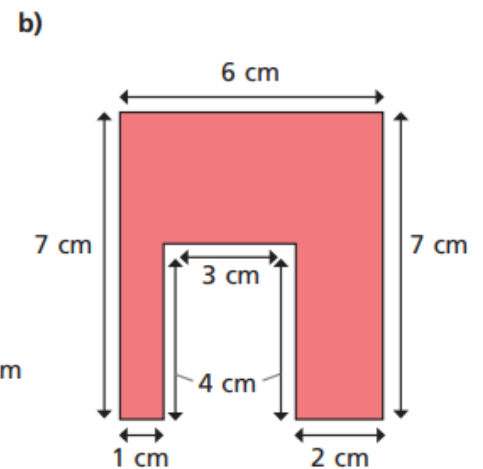What could Dora's number be?
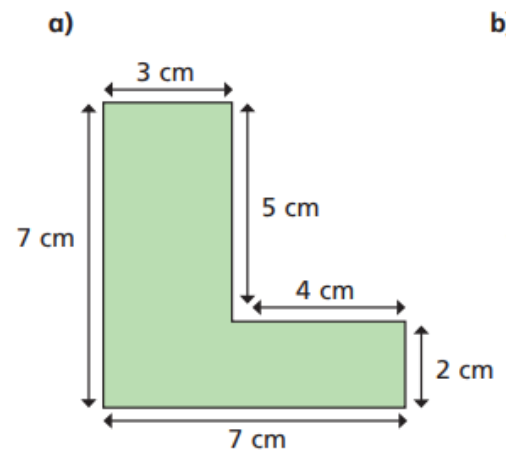
Thursday

Calculate perimeter

1 Calculate the perimeter of each shape.

a)
1 cm
1 cm

c)
1 cm
1 cm

b)
1 cm
1 cm

d)
1 cm
1 cm

2 Calculate the perimeter of these shapes.

a)
8 cm
3 cm   3 cm
8 cm

b)
6 cm
10 cm
8 cm

3 Calculate the perimeter of these shapes.

a)
3 cm
5 cm
7 cm
4 cm
2 cm
7 cm

b)
6 cm
7 cm   7 cm
3 cm
4 cm
1 cm   2 cm

4 Work out the missing lengths on these shapes.

a)

3 cm
5 cm
[ ] cm
[ ] cm
7 cm

b)

10 cm
6 cm
[ ] cm
[ ] cm
2 cm
3 cm
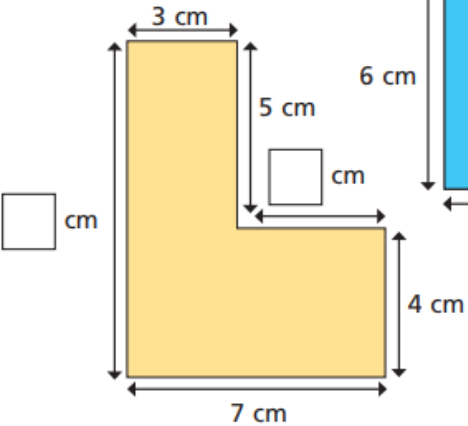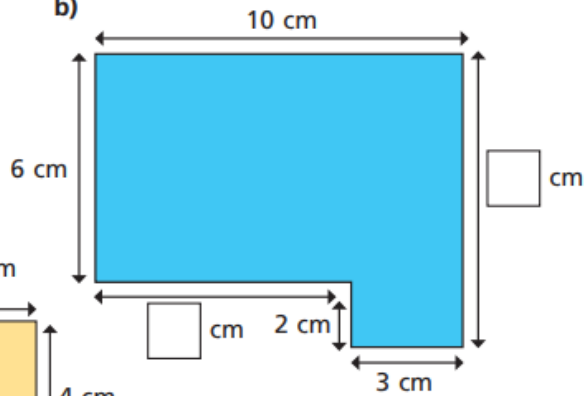
Discuss with a partner how you worked them out.

5 Calculate the perimeter of these shapes.

a)

10 cm
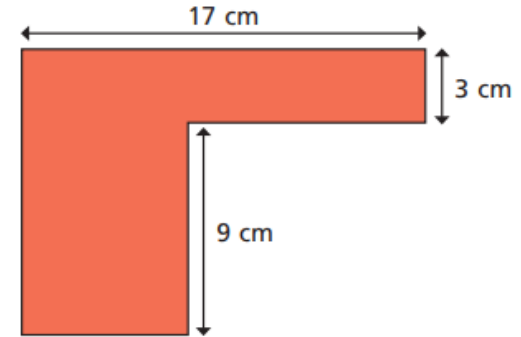4 cm
2 cm
9 cm

[ ]

b)

9.2 cm
9.2 cm
4 cm
3.5 cm
3.5 cm

[ ]
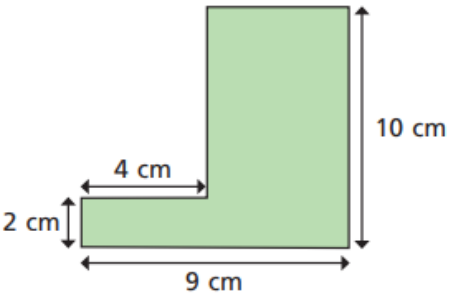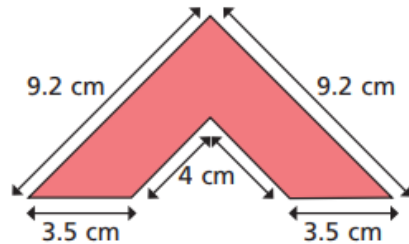
6 Mo thinks that there is not enough information to calculate the perimeter of the shape.

Is he correct? How do you know?

17 cm
3 cm
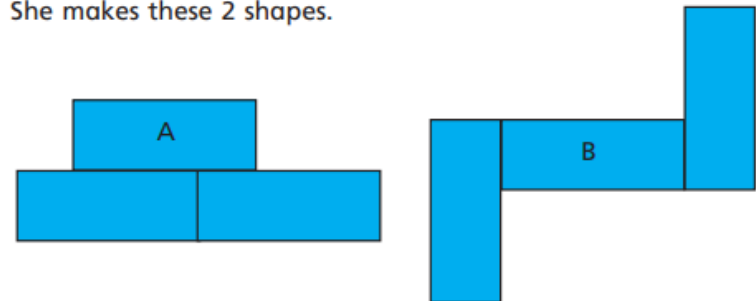9 cm

_____

_____

7 Rosie is making shapes made up of 3 rectangles.

Each rectangle has a length of 10 cm and a width of 4 cm.

She makes these 2 shapes.

A

B

a) Which shape has the greatest perimeter? _____

b) What other shapes can you make with 3 rectangles?

What is the perimeter of the shapes?

Friday

Note to Parents:

The Friday Challenge will be made available on the White Rose Year 6 Home Learning page closer the time. 😋