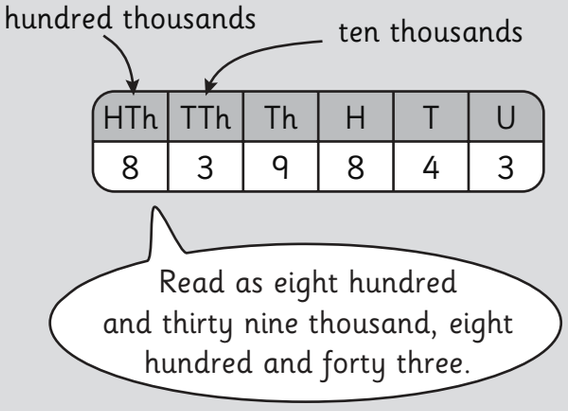
Place value

Remember

Place value – the ten digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 are used to build up large numbers.

- When you multiply numbers by 10 or 100 all the digits move 1 or 2 places to the left.
- When you divide numbers by 10 or 100 all the digits move 1 or 2 places to the right.

Example:
356 900 ÷ 100 = 3569
3569 × 10 = 356 900



Vocabulary
digit, ten thousand, hundred thousand, operation

1 What is the value of the digit 9 in the number 498 316?
Circle the correct answer.

nine million nine hundred nine thousand

ninety thousand nine hundred thousand

Hint: Use a place-value chart to help you.

2 Here are some number cards.

You can use each card once, to make a number like this.

(a) What is the biggest number you can make with the five cards? _____

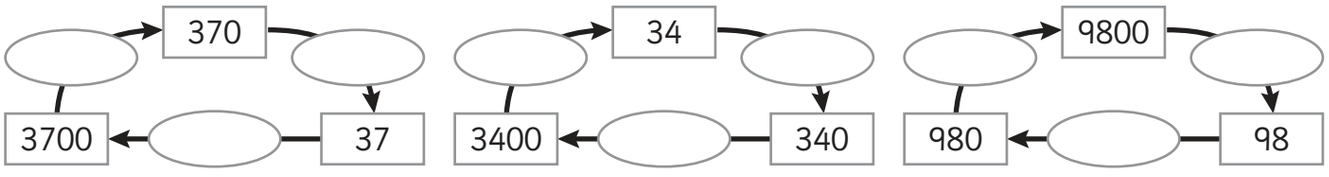
(b) What is the smallest number you can make with the five cards? _____

(c) Write your answers in words.

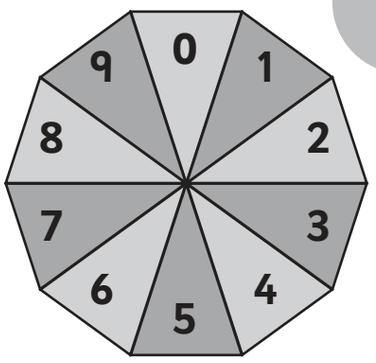
_____

_____

3 Identify the operations missing from the loops



Unit 1A: Number and problem solving
CPM framework 5Nn2, 5Nn3, 5Nn5; Teacher's Resource 1.1



4 Place value challenge – a game for two players

Use the spinner and a game board.

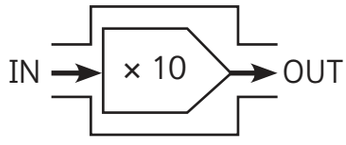
Take turns to spin the spinner and write your number in any cell on the game board. The winner is the player with the highest number when all the boxes have been filled.

Game 1	HTh	TTh	Th	H	T	U
Player 1						
Player 2						

Game 2	HTh	TTh	Th	H	T	U
Player 1						
Player 2						

Hint: Think carefully before placing each number. Remember, you can use any cell. Practise saying the numbers.

5 Complete the table for each function machine.

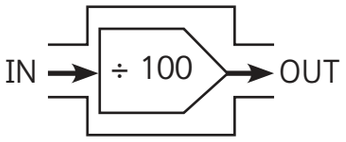


IN	3489		45 678		18 700	
OUT		8640		379 020		18 700

If you know the 'out' number you need to divide by 10 to find the 'in' number, for example:

8640 ÷ 10 = 864

Th	H	T	U
8	6	4	0
	8	6	4



IN	54 800		45 100		18 700	
OUT		8640		9020		1870

If you know the 'out' number you need to multiply by 100 to find the 'in' number, for example:

8640 × 100 = 864 000

HTh	TTh	Th	H	T	U
		8	6	4	0
8	6	4	0	0	0

Ordering and rounding

Remember

When comparing numbers:
< means 'is less than' for example 515 005 < 515 505
> means 'is greater than', for example 515 505 > 515 005

When rounding numbers:
to the nearest 10 look at the units digit so 2364 rounds down to 2360
to the nearest 100 look at the tens digit so 2364 rounds up to 2400
to the nearest 1000 look at the hundreds digit so 2364 rounds down to 2000

1 Write the correct sign, < or >, between the numbers in each pair.

4567 ☐ 4657 5454 ☐ 5054 34 686 ☐ 35 860

7878 ☐ 7808 65 646 ☐ 65 628 654 659 ☐ 654 751

Hint: The point of the symbol always points to the smaller number.
small < large large > small

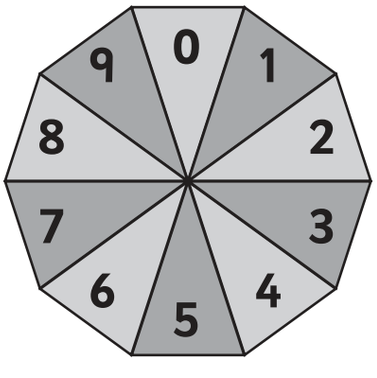
2 Use the digits 2, 3, 5 and 7 to make five different four-digit numbers.
Use 2, 3, 5 and 7 in each of your numbers.

☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Write the numbers in order starting with the smallest.

_____ _____ _____ _____ _____

3 Use the spinner twenty five times.
Write the numbers in the boxes to give five five-digit numbers.



☐☐☐☐☐ ☐☐☐☐☐
☐☐☐☐☐ ☐☐☐☐☐
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Write the numbers in order starting with the smallest.

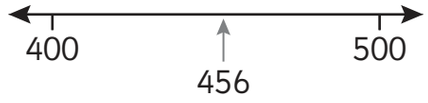
_____ _____ _____ _____ _____

Unit 1A: Number and problem solving
CPM framework 5Nn6, 5Nn8; Teacher's Resource 1.2

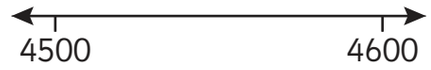
4 Complete this table to show numbers rounded to the nearest 100.

	rounded to the nearest 100
456	
4562	
45 628	
456 281	

Hint: Using a number line can help you.



Use this line to help you with the next part of the table.



5 Which number in the list satisfies all the clues? _____

3826 3778 3783 3762 3781 3819 3772 3779

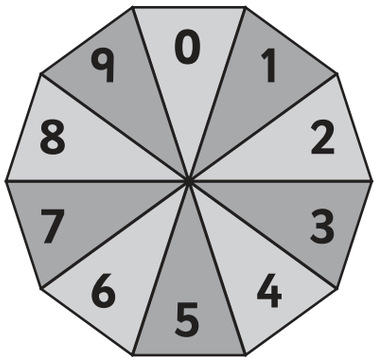
- the number is 3800 to the nearest 100
- the number is 3780 to the nearest 10
- the number is even.

Hint: You can use the clues in any order. Try crossing out the numbers that do not satisfy the clue. You should have just one number left.

Write the eight numbers in order starting with the smallest number.

_____

6 Rounding up or down – a game for two players



Use the spinner and the record sheet below.

Player 1 spins the spinner four times to create a four-digit number.
Player 2 rounds the number to the nearest 100.

Example:

1st spin	2nd spin	3rd spin	4th spin
3	8	6	5

3865 rounds up to 3900

Hint:

If the number rounds up the player scores 1 point and if the number rounds down they score 2 points. In the example, 3865 rounds up so only scores 1 point.

Swap roles and repeat. After five turns each the winner is the player with the higher score.

Player 1		**Player 2**	
Number	Score	Number	Score
Total		Total	