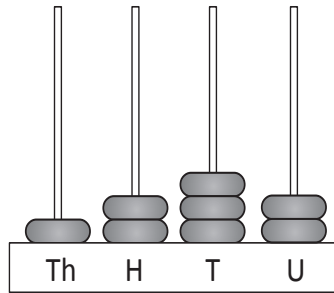


Place value of whole numbers – place value to 4 digits

We can show the value of a 4 digit number on an abacus and also with base ten blocks.



1 is worth 1 000 or one thousand.
 2 is worth 200 or two hundreds.
 3 is worth 30 or three tens.
 2 is worth 2 or two units.

1 Below are 4 different numbers written in 3 different ways. Find the 3 that match and colour them the same:

Thousands	Hundreds	Tens	Units
5	4	3	2
5	3	4	3
4	5	2	4
4	3	8	8

- Five thousand, four hundred and thirty two
- Four thousand, five hundred and twenty four
- Five thousand, three hundred and forty three
- Four thousand, three hundred and eighty eight

- 4 524
- 5 432
- 4 388
- 5 343

2 Write the number shown on each abacus:

a

b

c

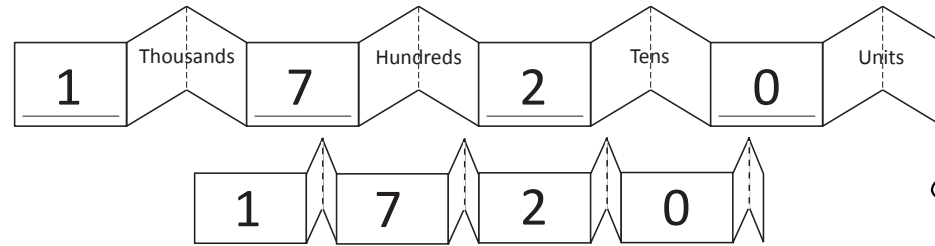
d

e

f

Place value of whole numbers – expanded notation

Expanded notation is when we write out each digit in full. Numeral expanders are a handy way of showing the value of each digit.



Remember that the cube represents 1 000.



REMEMBER

1 Which number is each set of base 10 blocks representing? Write this number in the box and show it as expanded notation:

a

b

c

2 Draw a line to match the numbers in expanded notation to the numerals.

- | | | |
|----------|---------------------------------------|-------|
| a | 4 thousands 6 hundreds 1 ten 2 units | 4 254 |
| b | 4 thousands 6 hundreds 8 tens 0 units | 4 361 |
| c | 4 thousands 4 hundreds 1 ten 1 unit | 4 680 |
| d | 4 thousands 3 hundreds 6 tens 1 unit | 4 612 |
| e | 4 thousands 2 hundreds 5 tens 4 units | 4 411 |

Place value of whole numbers – expanded notation

- 3 Here is a numeral expander folded up at different places. Fill in the blank spaces to show all the different ways of naming this number:

1 576 One thousand five hundreds and seventy six

= 1 thousand + 5 hundreds + 7 tens + 6 units

= _____ hundreds + 7 tens + 6 units

= _____ tens + 6 units

= _____ units

- 4 Put each of these numbers in a numeral expander.

a 1 567

b 2 567

c 5 789

d 7 624

- e Which number has 25 hundreds, 6 tens and 7 units? _____

- 5 Complete each row of the table like the first row:

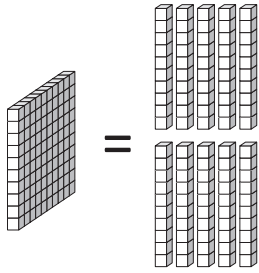
Numeral	Expanded notation in numbers	Expanded notation in words
592	$500 + 90 + 2$	59 tens and 2 units
	$600 + 70 + 8$	
		7 hundreds and 14 units
6 703		67 hundreds and ___ units
		46 hundreds and 6 units
2 018		2 thousands and 18 units

83 could also be described as 83 units and 540 could be called 54 tens.

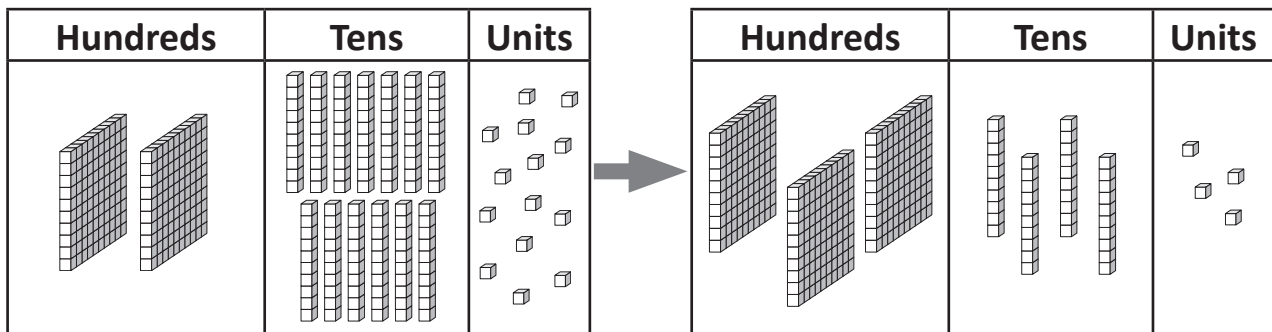
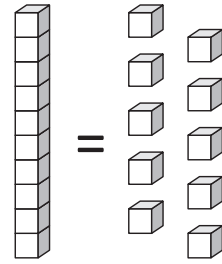


THINK

Place value of whole numbers – trading

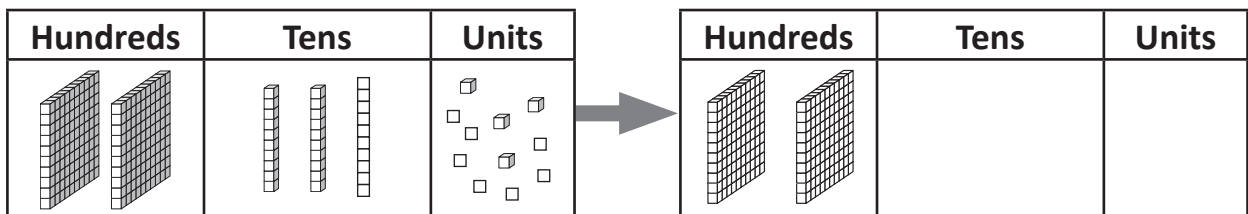


These place value boards show us how trading works. If we have 10 units, we should trade them for a ten. If we have 10 tens, we should trade them for a hundred. This is how our number system works.

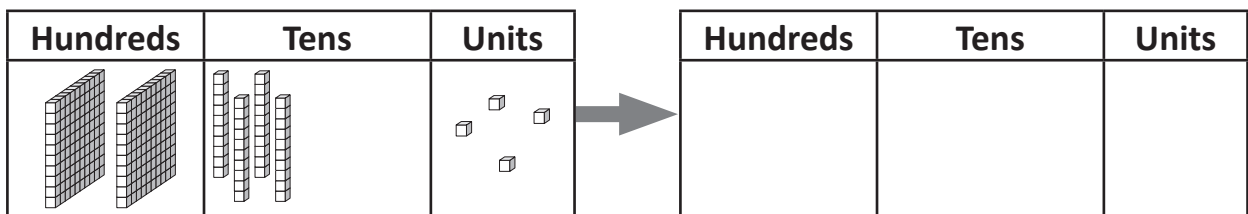


1 Practise trading by adding the amount to each place value board. Draw the amount to be added on the first board and show it regrouped on the next board. Write the answer in the top box. The first one has the amount to be added drawn on to show you.

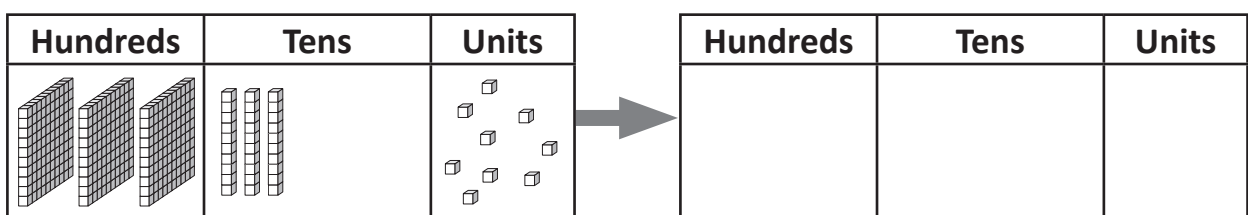
a 17 more



b 80 more

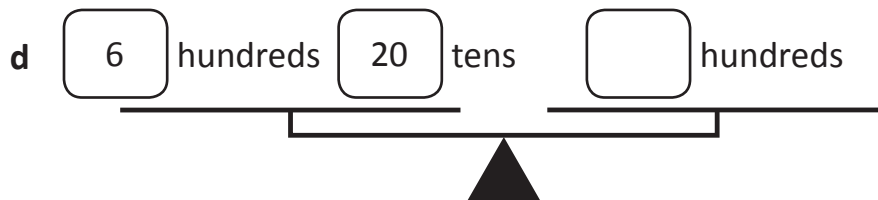
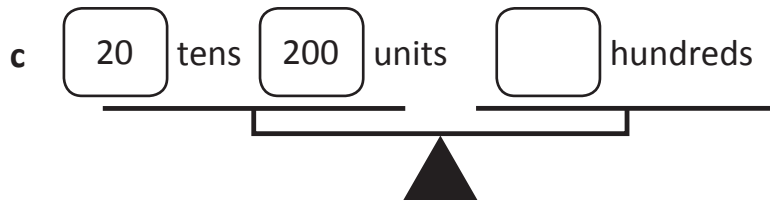
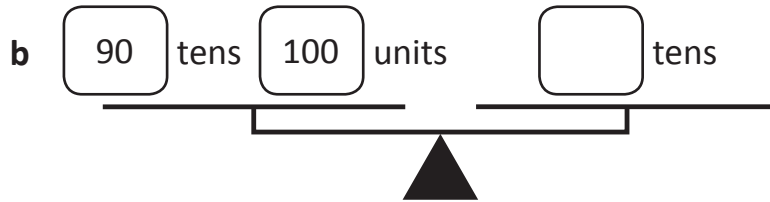
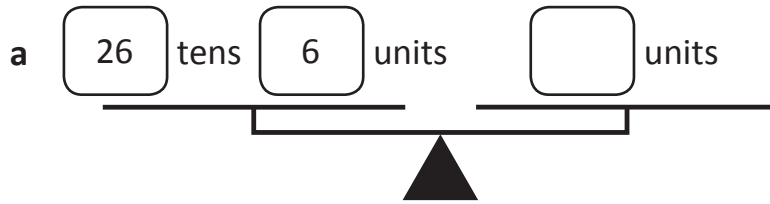


c 27 more



Place value of whole numbers – trading

2 Balance the scales by writing the digits that make both sides the same:



These are the same amounts but are given different names. Remember 22 tens is 220.



REMEMBER

3 Which number am I?

a I have 4 hundreds and 36 tens and 23 units.

b I have 14 hundreds and 20 tens.

c I have 50 tens and 200 units.

Place value of whole numbers – calculator work

1 Use your calculator to change these numbers. Write what you did under each one:

a Change 567 to 507 by taking away one number.

b Change 2 093 to 2 100 by adding one number.

c Change 760 to 60 by taking away one number.

d Turn 997 into a 4 digit number.

Use what you know about place value to change numbers just by adding and subtracting.



DISCOVER

2 Use a calculator to follow these steps and write the number you end up with.

a Enter the number 1 hundred less than 3 415. Subtract 15 and add 700.

b Enter the 84 tens. Add 16 tens.

c Enter the number 1 before 4 400. Subtract 99. Add 700.

d Enter the number 3 hundred more than 2 579. Make it 1 000 more. Add 1 unit then 20 units. Now add an amount to make this number 4 000. What did you add?



Getting ready

This is a game for 2 to 4 players. Your group will need a die and some MAB blocks. Each player will need a copy of the game board below.



copy



What to do

Each player rolls the die to see how many shorts they may take from the pile in the centre. Take turns rolling the die and collecting shorts. When you have 10 shorts you can trade them for 1 long. When you have 10 longs you can trade them for a flat. The winner is the first person to get a flat on their game board.

	Hundreds (flats)
	Tens (longs)
	Units (shorts)



Getting ready

This is a game for 3 to 6 players. You need to copy this page and cut out the cards below.



copy



What to do

Choose a player to be the caller. The rest of the players each write a list of six 4 digit numbers. The caller calls out one card at a time and declares which column the number is in. For example, the caller might draw a card with 8 on it and say, "8 in the hundreds place". If a player has an 8 in the hundreds place in one of their numbers, they circle that digit. The caller keeps drawing cards and saying the digit's place value until one of the players has circled all of the digits in one of their numbers. This player wins the round. Swap roles and play again until each person has had a turn at being the caller.

1	2	3	4	5
6	7	8	9	1
2	3	4	5	6
7	8	9	1	2