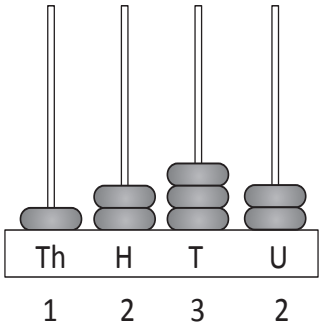
Place value of whole numbers – place value to 4 digits

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.

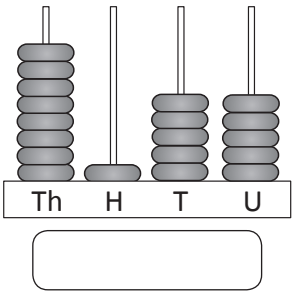
2 is worth 200 or two hundreds.

3 is worth 30 or three tens.

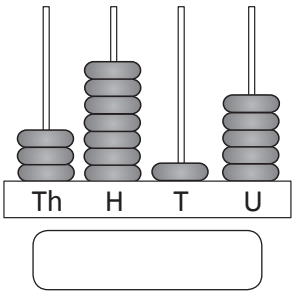
2 is worth 2 or two units.

1 **Write the number shown on each abacus:**

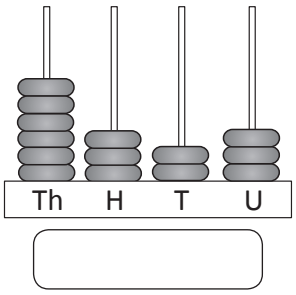
a



b

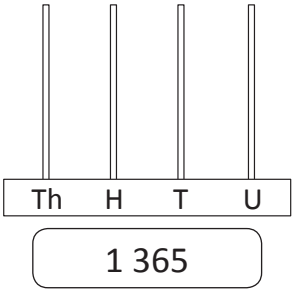


c



2 **Draw the beads to show the numbers:**

a



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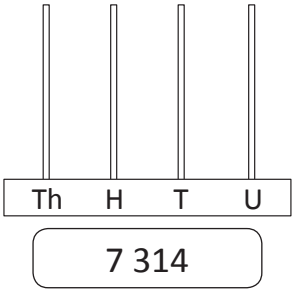
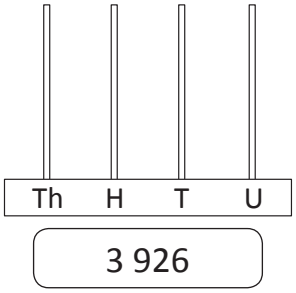


c



3 **Circle the digit that matches the place value:**

a tens: 2 330

b units: 4 322

c hundreds: 9 218

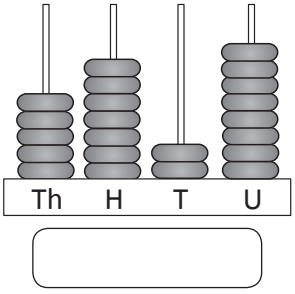
d units: 5 661

e tens: 8 754

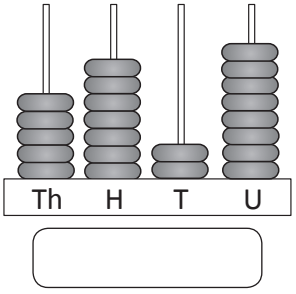
f thousands: 6 845

4 **Add a bead to each abacus anywhere you like and write the new number:**

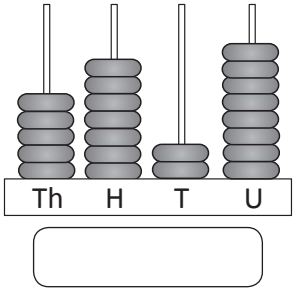
a



b



c



5 **In the table below, write as many 4 digit numbers as you can where the digit in the hundreds column is greater than the digit in the thousands column and the digit in the units column is smaller than the digit in the tens column:**

Thousands	Hundreds	Tens	Units

6 **Record the steps you follow to wipe out each digit and turn it into a zero:**

8 439

a Wipe out the 3 _____

b Wipe out the 9 _____

c Wipe out the 8 _____

d Wipe out the 4 _____

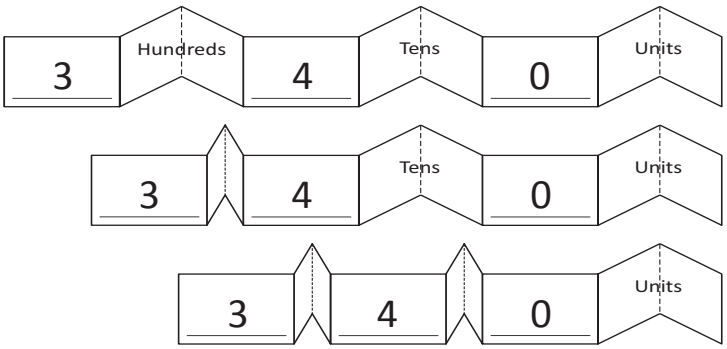
7 **Now play this game with a partner:**

First choose a 4 digit number and write it here:

Enter this number in your calculator and then take turns subtracting any digit 1 to 9 from this number. This time you must avoid wiping out any digits (changing any to zero). If you do wipe out a digit on your turn, you are out.

Place value of whole numbers – expanded notation

Numeral expanders show how a number can be expressed in different ways. Look at this example:



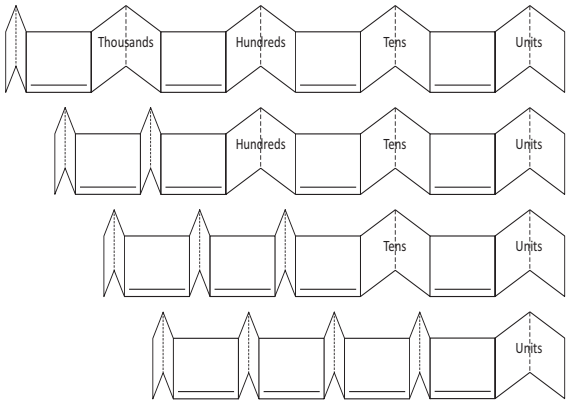
By folding the numeral expander it shows that 340 is made up of 34 tens or 340 units. This makes sense because:

$34 \times 10 = 340$ and

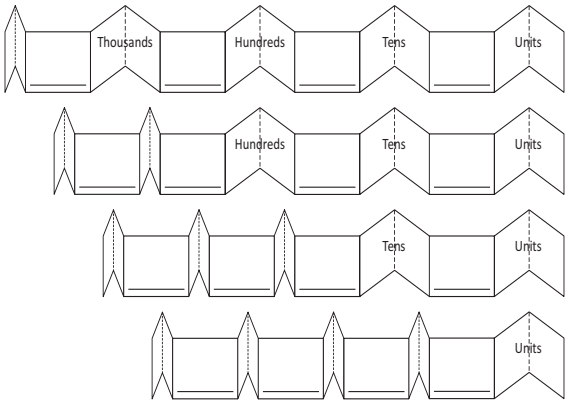
$340 \times 1 = 340$

1 **Write the number shown on each numeral expander:**

a 1 576



b 5 485



2 **Complete each row of the table like the first row:**

Numeral	Expanded notation in numbers	Expanded notation in words
4 672	4 000 + 600 + 70 + 2	46 hundreds, 7 tens and 2 units
	5 000 + 200 + 30 + 9	
		61 hundreds, 4 tens and 2 units
3 180		31 hundreds and _____ tens
		35 hundreds and 6 units
	8 000 + 200 + 50 + 8	

Place value of whole numbers – expanded notation

3 **Rename the following numbers in hundreds:**

a 4 100 _____ **b** 9 800 _____

c 6 700 _____ **d** 4 500 _____

4 **Rename the following numbers in tens:**

a 5 560 _____ **b** 8 880 _____

c 4 570 _____ **d** 8 970 _____

5 **Write the following amounts as numerals from the box:**

a 32 hundreds, 9 tens and 2 units ☐

b 4 thousands, 6 hundreds, 1 ten and 2 units ☐

c 8 thousands, 67 tens and 2 units ☐

d 41 hundreds and 7 units ☐

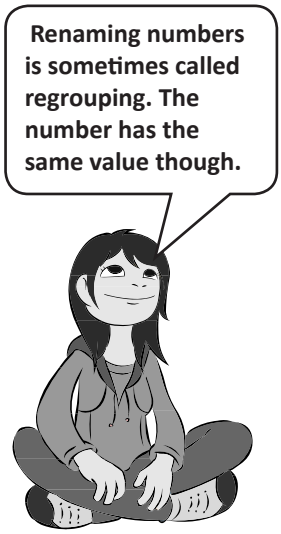
4 107

8 672

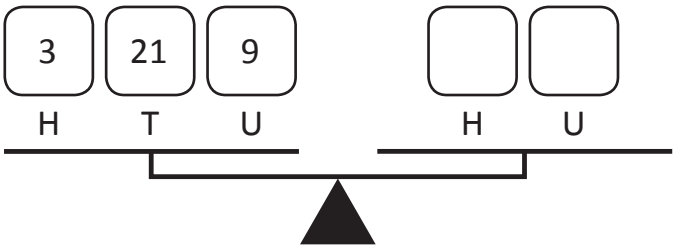
4 612

3 292

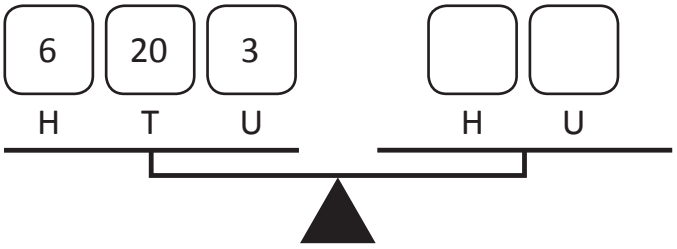
6 **Balance the scales by writing the digits that make both sides the same:**



a



b



Place value of whole numbers – working with place value

Zero plays an important role in numbers.
It tells us that the value of the column is nothing and holds the place of other numbers.

1 **Write these numbers:**

a Four thousands, six hundreds, zero tens and 1 unit. ☐

b Two thousands, zero hundreds, zero tens and zero units. ☐

c Six thousands, three hundreds, 1 ten and zero units. ☐

d Two thousands, zero hundreds, 6 tens and zero units. ☐

e Ten thousands, nine hundreds, zero tens and zero units. ☐

2 **A zero has been added to each number in different places. Match them to a number in the box and write this number in figure. The first one has been done for you.**

a	82	Eight thousand and ninety two	*8 092*
b	570	Two hundred and seventy	
c	892	Eight hundred and two	
d	27	Six thousand, seven hundred and seven	
e	677	Five thousand and seventy	

3 **Record the steps you followed to use a calculator to change:**

a 567 to 507 by taking away one number. ☐

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

c 760 to 60 by taking away one number. ☐

d 997 into a 4 digit number. ☐

4 **Use these digits to make the following 4 digit numbers:**

8	7	1	0

a A number with 7 in the hundreds place. ☐

b Two numbers with 0 in the units place. ☐ ☐

c One number that has 71 tens. ☐

d A number that has 87 tens. ☐

e A number that has zero as a place holder. ☐

5 **Help these kids remember their special numbers:**

a Charlie needs a password to access his computer. The password includes the digits 5 671. It is the smallest odd number.

What is the password? ☐☐☐☐

b Bec needs to withdraw money from the bank but she can't remember her PIN. The password includes the digits 3 398. It is the largest even number.

What is her PIN? ☐☐☐☐

c The alarm is ringing in Frankie's house and she needs to remember the code to switch it off. She knows the numbers include 5 927 and that it begins with 9. It is the second largest number.

What is the alarm code? ☐☐☐☐

d Max recently changed the combination to the lock on his games cupboard. The combination includes the digits 6 119. It is the second smallest number.

What is the combination to the lock? ☐☐☐☐

Digit decisions

apply

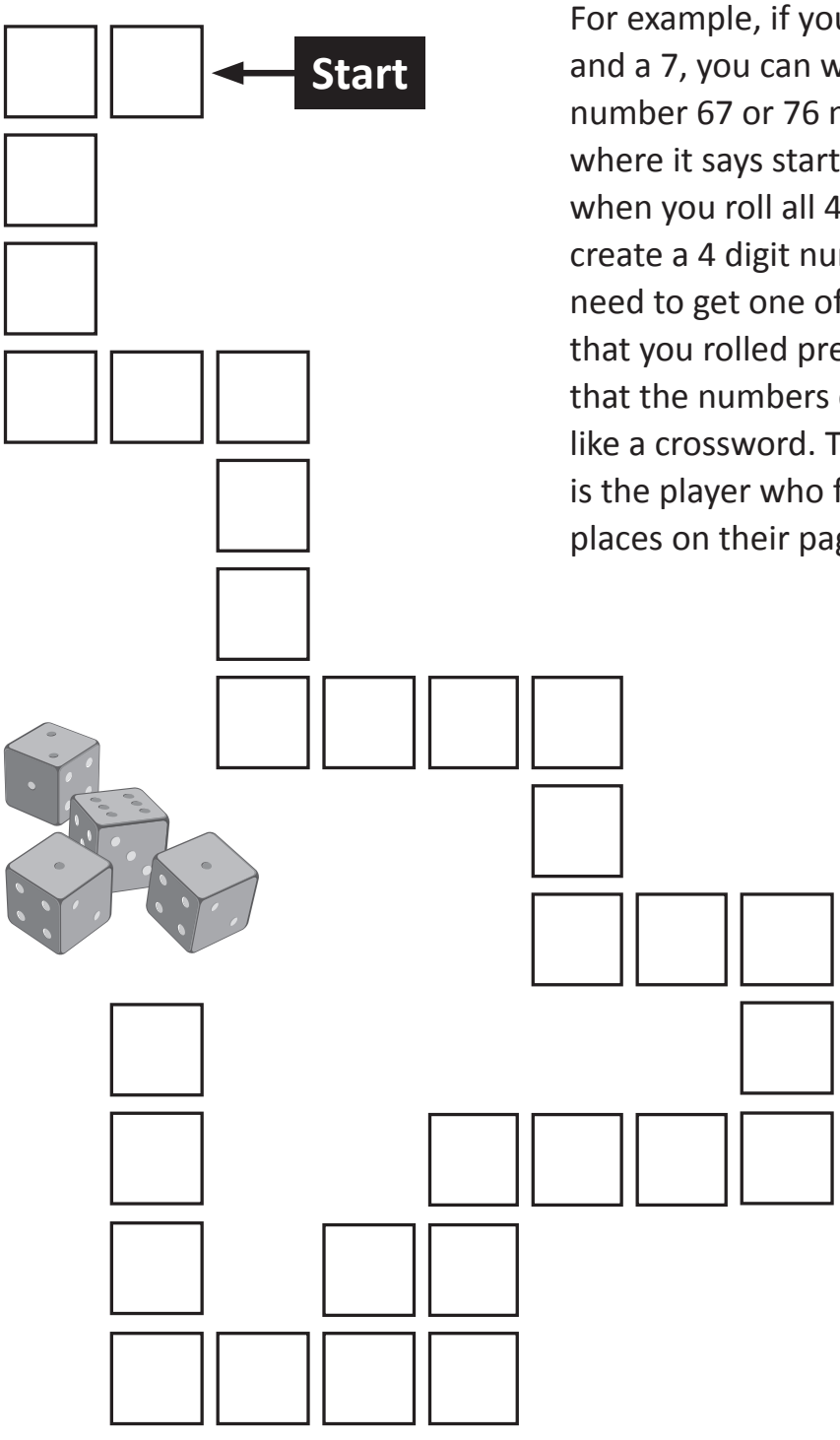
Getting ready

This is a game for 2 players. You will need a copy of this page and a set of 4 dice.

copy

What to do

Each player takes turns rolling the dice and writing one digit in each box where they will fit. You might roll 2 dice, 3 dice or 4 dice, depending on the squares.



For example, if you roll a 6 and a 7, you can write the number 67 or 76 next to where it says start. Then, when you roll all 4 dice to create a 4 digit number, you need to get one of the digits that you rolled previously so that the numbers connect like a crossword. The winner is the player who fills all the places on their page first.

Wiped out

apply

Getting ready

This is a game for 3 players. You will need a copy of this page and the cards (below) cut out.

copy

What to do

1 person is the caller and the other 2 are the players.

The caller turns over a digit card and announces the number. Each player finds the same digit card and places it in one rectangle in the place value table. Repeat this until each player (including the caller) has a 4 digit number. The caller then reads out their number.

The player who gets a higher number than the caller scores 5 points.
If a player has the same number as the caller, they score 3 points.
If a player has a lower number than the caller, they score 1 point.
If the caller's number is higher than both the players, they score 10 points.

What to do next

Swap roles. Keep playing until each person has had a turn of being the caller. Add up points at the end to find the overall winner.

1	2	3	4	5
6	7	8	9	