

Powers of 10



1 Draw counters to show the numbers in the place value charts.

a) 5,241

HTh	TTh	Th	H	T	O

b) 52,410

HTh	TTh	Th	H	T	O

c) 524,100

HTh	TTh	Th	H	T	O

What is the same? What is different?

2 Complete the calculations.

a) $100 \times 10 =$

b) $100,000 \times 10 =$

c) $100,000 \times$ $= 1,000,000$

d) $10,000 \div 10 =$

e) $1,000,000 \div 10 =$

f) $\div 10 = 100$

3 a) How many thousands are there in 30,000?

b) How many thousands are there in 500,000?

c) How many thousands are there in 530,000?

d) How many thousands are there in 5,300,000?

4 a) Show 27,000 on the Gattegno chart.

1,000,000	2,000,000	3,000,000	4,000,000	5,000,000	6,000,000	7,000,000	8,000,000	9,000,000
100,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000
10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

b) Complete the sentences.

27,000 is 10 times the size of

27,000 is one-tenth the size of

is 100 times the size of 27,000

is one-hundredth the size of 27,000



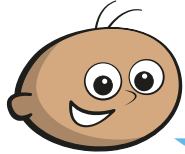
- 5 1 litre is 1,000 times the size of 1 millilitre.
There are 1,000 ml in 1 litre.

1 l	1 l
1,000 ml	1,000 ml

- a) How many millilitres are there in 2 litres? ml
- b) How many millilitres are there in 2,000 litres? ml
- c) How many litres are equal to 202,000 ml? l

- 6 Each child chooses one of the numbers.

31,000	310	3,100	3,100,000
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My number is 100 times the size of Annie's.

Tommy



My number has thirty thousands.

Annie



Amir's number is one-tenth the size of my number.

Sam



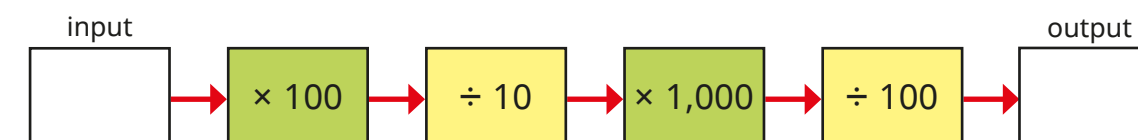
My number is one-hundredth the size of Annie's.

Amir

Which number does each child have?

Tommy		Sam	
Annie		Amir	

- 7 Here is a function machine.



a)



I put the number 480 into the machine.

What number will Teddy get out of the function machine?

b)



I put a number in and got the number 39,000 out of the machine.

What number did Whitney put into the function machine?

Compare methods with a partner.

- c) Choose an input for the function machine.
What is your output?

Tell a partner your output.

Can they work out your input?