

Multiply by 10, 100 and 1,000

1 Complete the calculations and sentences.

Use place value counters to help you.

Th	H	T	O	Tth	Hth
			● ●	● ● ● ●	

a) $2.3 \times 10 =$

When the number is multiplied by 10 the counters move place to the left.

b) $2.3 \times 100 =$

When the number is multiplied by 100 the counters move places to the left.

c) $2.3 \times 1,000 =$

When the number is multiplied by 1,000 the counters move places to the left.

2 Complete the diagram.



3 a) Draw counters on the place value charts to represent each calculation.

4.4×1

Th	H	T	O	Tth	Hth
			● ● ● ●	● ● ● ●	

4.4×10

Th	H	T	O	Tth	Hth
			● ● ● ●	● ● ● ●	

←

4.4×100

Th	H	T	O	Tth	Hth
			● ● ● ●	● ● ● ●	

←

$4.4 \times 1,000$

Th	H	T	O	Tth	Hth
			● ● ● ●	● ● ● ●	

←

b) Complete the calculations.

$4.4 \times 1 =$

$4.4 \times 10 =$

$4.4 \times 100 =$

$4.4 \times 1,000 =$

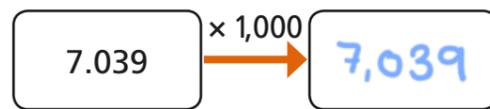
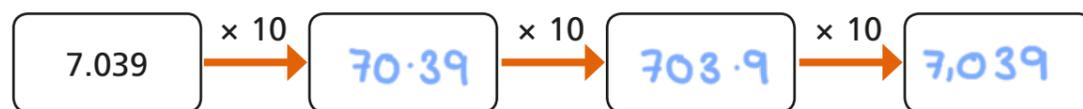
What do you notice?



4 Complete the calculations.

- a) $13.44 \times 10 =$ 134.4 d) $4.4 \times$ 1,000 $= 4,400$
- b) $41.4 \times 100 =$ 4,140 e) 103 $= 1.03 \times 100$
- c) $0.415 \times 1,000 =$ 415 f) $30.44 =$ 3.044 $\times 10$

5 Complete the diagrams.



What do you notice? Why does this happen?

They all give the same final answer because
 $10 \times 10 \times 10 = 100 \times 10 = 1,000$

6 Write $>$, $<$ or $=$ to compare the number sentences.

- $1.4 \times 10 \times 10 \times 10$ = $1.4 \times 1,000$
- $1.4 \times 10 \times 100$ = $1.4 \times 1,000$
- $1.4 \times 10 \times 10$ < $1.4 \times 1,000$
- $1.4 \times 10 \times 2$ < 1.4×100

7 Kim is calculating 14.3×200
 She writes this as her answer.

$$14.3 \times 200 = 28.600$$

Explain Kim's mistake.

She has multiplied by 2 and added two
zeros. She hasn't considered the place value
of each digit. $14.3 \times 200 = 2860$

8 Use the cards to complete the calculation.

You can use each card more than once.



E.g. 0.002 $\times 10$ $\times 100$ $\times 1,000$ $= 2,000$

How many ways is it possible to complete this calculation?

Talk about it with a partner.

