Name _____ Date _____

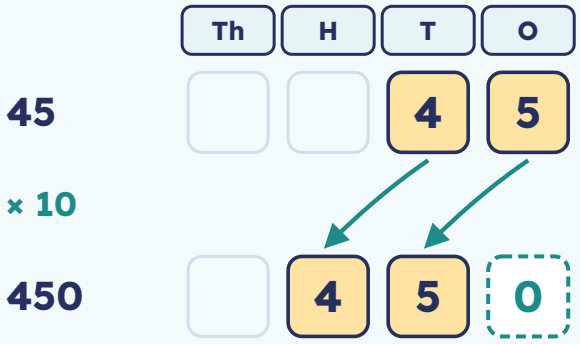
Digits slide left

Multiplying by 10, 100 or 1,000 makes a number 10, 100 or 1,000 times the size.

1 Learn



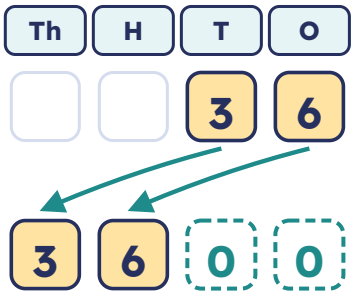
When you multiply by **10**, every digit slides **one place to the left**. An empty place gets a **zero** to hold it.



Multiply by	Digits move
× 10	1 place left
× 100	2 places left
× 1,000	3 places left

Worked example: 36 × 100

1. Put 36 in the chart: 3 tens and 6 ones.
2. × 100 means every digit slides **2 places** left.
3. The 3 lands in the thousands. The 6 lands in the hundreds.
4. The tens and ones are now empty: write a **0** in each.
5. Read it: 36 × 100 = **3,600**.



Flip's tip: count the zeros in 10, 100 or 1,000. That's how many places the digits slide. When you multiply a whole number, the answer is always **bigger**.

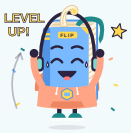
Warm up: fill in the answers.

7 × 10 = ____ **7 × 100 =** ____ **7 × 1,000 =** ____ **52 × 10 =** ____

Grown-ups: read Flip's words aloud together. Ask "Which way do the digits slide? How many places?" before each answer. Try to avoid "just add a zero": it works for whole numbers but breaks with decimals later on. Say "the digits slide and a zero holds the empty place".

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2 Try it together a child and a grown-up, about 10 minutes



Slide strip

You need: a strip of paper, a pen, 3 or 4 small squares of paper (or sticky notes), and 3 scraps of paper.

1. Draw 5 columns on the strip and label them **TTh, Th, H, T, O**. Write **× 10**, **× 100** and **× 1,000** on the scraps and fold them.
2. The grown-up picks a 1- or 2-digit number. Write each digit on a square and put the squares in the right columns.
3. Pick a folded scrap. Slide **every** square left by the right number of places.
4. Fill each empty place up to the ones with a zero (write it on your finger, or a spare square). Read the new number aloud.
5. Write it in the table, then swap jobs.

Start number	Multiply by	Places slid	New number

Grown-ups: ask "Is the new number bigger or smaller? How many times bigger?" If your child slides only one square, or slides the wrong way, put the squares back and slide them together, saying "every digit moves".

3 Practise

A. Multiply. Think: which way, and how many places?

8 × 10 = ☐ **8 × 100 =** ☐ **8 × 1,000 =** ☐ **64 × 10 =** ☐

64 × 100 = ☐ **30 × 10 =** ☐ **125 × 10 =** ☐ **125 × 100 =** ☐

B. What was it multiplied by? Write 10, 100 or 1,000.

52 × ☐ **= 520** **52 ×** ☐ **= 5,2009 ×** ☐ **= 9,000** **140 ×** ☐ **= 14,000**

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C. Write each answer in the place value chart, one digit in each box. Remember the zeros.

Question	TTh	Th	H	T	O
27 × 100					
409 × 10					
6 × 1,000					
38 × 1,000					

D. Draw a ring round the right answer.

93 × 100 =	930	9,300	93,000
7 × 1,000 =	700	7,000	70,000
250 × 10 =	25	2,500	25,000
16 × 1,000 =	1,600	16,000	160,000

Challenge

Sam worked out **45 × 10 = 4.5**. Is he right? What did he do, and what should the answer be?

Hint: does multiplying a whole number by 10 make it bigger or smaller?

I can… Tick when you can.

- ☐ slide digits left to multiply by 10, 100 or 1,000
- ☐ use a zero to hold an empty place
- ☐ explain why 45 × 10 is 450