Name _____ Date _____

Ten times bigger

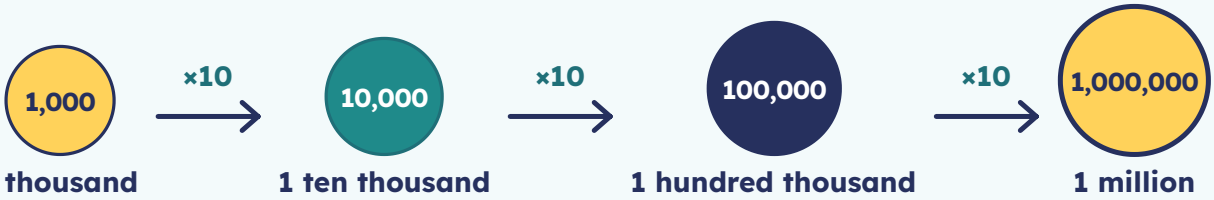
Each place is worth ten times the place to its right.

1 Learn



10 ones make 1 ten. 10 tens make 1 hundred. This swap of **10 for 1** keeps going, all the way up to **a million**!





Example: here are **12** thousands. 12 is more than 9, so **swap 10 for 1**.



The ringed 10 thousands become **1 ten thousand**:



TTh	Th
1	2

= 12,000

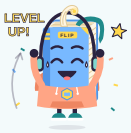
Flip's tip: one place **left**: **10 times** as much. One place right: **one tenth** as much.

Warm up: fill the gaps. **1, 10, ____, 1,000, ____, 100,000, ____**

Grown-ups: ask "How many of these make one of those?" about two places side by side: always 10. Schools call the blocks Dienes, then use place value counters.

Name _____ Date _____

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



Swap shop

You need: about 30 small things to use as counters (dry pasta, buttons or coins) and a pencil. The chart below is your mat.

1. Put down the counters for the round, like **13 in the hundreds** column.
2. Swap every **10 counters** for **1 counter** in the next column to the left, until no column has more than 9.
3. Read the number aloud and fill in the table. For round 4, the grown-up picks.
4. Swap back: change 1 counter for 10 in the column to its right. Is it the same number?

HTh hundred thousands	**TTh** ten thousands	**Th** thousands	**H** hundreds	**T** tens	**O** ones

Round	We put down	After swapping	The number
1	13 hundreds		
2	25 thousands		
3	10 ten thousands		
4			

Grown-ups: in round 1, 13 hundreds become 1 thousand and 3 hundreds. Ask "Why do we stop at 9?" (One more would make 10, and 10 is swapped for 1 in the next place.)

3 Practise

A. Complete each swap.

10 tens = 1 _____ 10 hundreds = 1 _____

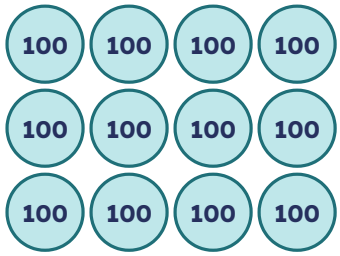
10 thousands = 1 _____ 10 ten thousands = 1 _____

10 hundred thousands = 1 _____ _____ ones = 1 hundred

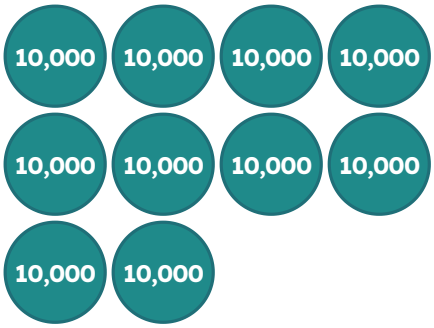
Ten times bigger

Name _____ Date _____

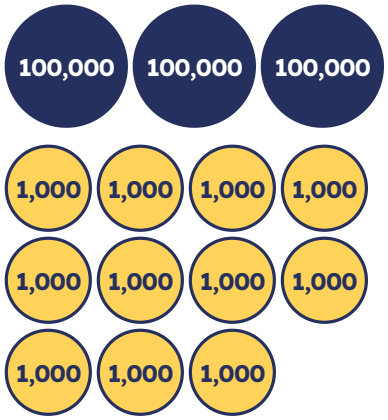
B. Count the counters. Swap 10 for 1 where you can, then write the number.



= _____



= _____



= _____

C. Ring the ones that are **true**. Cross out the ones that are **false**.

10 thousands = 10,000	100 tens = 1,000	1,000 is 10 times 10
10 × 100,000 = 1,000,000	100,000 is 10 times 10,000	10,000 is 10 times 100

D. Fill the gaps.

10 × _____ = 1,000,000

_____ is 10 times 3,000

50,000 is 10 times _____

One tenth of 700,000 is _____

Challenge

Mia says, "A million is 10 times 1,000." Is she right? Explain how you know.

Hint: count the places from 1,000 up to 1,000,000.

I can...

Tick when you can.

- [ ] explain that each place is worth 10 times the place to its right
- [ ] swap 10 counters for 1 counter in the next place to the left
- [ ] say what 10 of any place make, all the way up to a million