Ten times bigger: answers and notes

What your child practised: each place is worth ten times the place to its right, and swapping 10 of one place for 1 of the next, up to a million (Year 5).

Page 1 · Warm up

100 · **10,000** · **1,000,000**

Page 2 · Swap shop

1: 1 thousand, 3 hundreds = **1,300**
2: 2 ten thousands, 5 thousands = **25,000**
3: 1 hundred thousand = **100,000** · 4: will vary

Page 2 · A. Swaps

1 **hundred** · 1 **thousand** · 1 **ten thousand**
1 **hundred thousand** · 1 **million** · **100** ones

Page 3 · D. Gaps

10 × **100,000** = 1,000,000 · **30,000** is 10 times 3,000 · 50,000 is 10 times **5,000** · one tenth of 700,000 is **70,000**

Page 3 · B. Counters

12 hundreds = **1,200** · 10 ten thousands = **100,000**
3 hundred thousands and 11 thousands: swap 10 thousands for 1 ten thousand = **311,000**

Page 3 · C. True or false

True: 10 thousands = 10,000 · 100 tens = 1,000 · 10 × 100,000 = 1,000,000 · 100,000 is 10 times 10,000
False: 1,000 is 10 times 10 (10 × 10 = 100) · 10,000 is 10 times 100 (10 × 100 = 1,000)

Challenge: No. 10 times 1,000 is **10,000**. From 1,000 to 1,000,000 is three places, so it is 10 × 10 × 10 = **1,000 times** as much: a million is a thousand thousands. A million is 10 times **100,000**.

Watch out for

- **"Just add a zero".** Say instead: "the digits move one place left, and 0 fills the ones place".
- **Mixing up ×10 and ×100.** Count the places moved: 1 place is ×10, 2 places ×100, 3 places ×1,000.
- **10 or more in one place.** It isn't finished yet: swap 10 for 1 in the next place to the left.

Going further (5 minutes, no paper)

- **How many make…?** Hundreds in 1,000? (10) Thousands in 1,000,000? (1,000)
- **Ten times machine:** say 4; your child makes it 10 times bigger again and again, up to 400,000.
- **In the game:** Chapter 2, Digit Detective, finds the value of every digit in a six-digit number.