Place value puzzles: answers and notes

What your child practised: using place value to solve digit card puzzles, find 10,000, 100,000 or 1,000,000 more or less, and solve real problems with numbers up to ten million (Year 6).

Page 1 · Warm up

1,000 more than 3,450,000: **3,451,000** ·
100,000 less than 2,600,000: **2,500,000** ·
10,000 more than 5,032,100: **5,042,100** ·
1 more than 6,999,999: **7,000,000**

Page 2 · Try it together

Answers will vary. Smallest: the smallest non-zero digit first, then the rest in order.

Page 2 · A. The table

3,295,400: **3,305,400** · **3,395,400** · **2,295,400**
8,904,050: **8,914,050** · **9,004,050** · **7,904,050**
1,990,000: **2,000,000** · **2,090,000** · **990,000**
6,950,000: **6,960,000** · **7,050,000** · **5,950,000**

Page 3 · B. Digit cards

greatest: **8,654,210** · smallest: **1,024,568** ·
smallest odd: **1,024,685** ·
greatest below 5 million: **4,865,210**

Page 3 · C. Problems

1. **2,466,300** · 2. **3,080,000 < 3,800,000** ·
3. **3,080,000** · 4. **1,000,000**, by **10,001**

Challenge: No. 0,356,789 is really 356,789, which has six digits. Put the smallest non-zero digit first, then the 0: **3,056,789**.

Watch out for

- **A zero at the front** of the smallest number. Ask "How many digits does it really have?"
- **Changing the wrong digit** for 10,000 or 100,000 more. Point to the column first.
- **Comparing only the first digit**: 989,999 is less than 1,000,000. Count the digits.

Going further (5 minutes, no paper)

- **Card shuffle:** say 7 digits aloud; your child says the greatest number they make.
- **Ten thousand more:** say a big number and ask for 10,000 more, then 100,000 more.
- **In the game:** this is the last chapter; any chapter can be replayed.