Why zero matters: answers and notes

What your child practised: knowing that Roman numerals have no zero and no place value, and how our digits use 0 and place value instead (Year 4).

Page 2 · Try it together

Answers vary: 38 needs 2 digits, XXXVIII needs 7.
The hunt: **88 = LXXXVIII**, with **8** symbols, needs the most of any number up to 100.
XXVII + XIV = 27 + 14 = **41 (XLI)**.

Page 2 · A. True or false

False (no symbol for zero) · **true** · **true** (in IX, the X is still 10) · **false** (in 52, the 5 is worth 50)

Page 1 · Warm up

3 = **III** · 30 = **XXX**

Page 3 · B. Numbers ending in 0

10 = **X** · 20 = **XX** · 50 = **L**
60 = **LX** · 70 = **LXX** · 100 = **C**
No symbol for the 0: the numeral just stops.

Page 3 · C. Match

14 **XIV** · 41 **XLI** · 16 **XVI** · 61 **LXI**

Page 3 · D. One reason

Any sensible reason, such as: a digit's place gives its value, so numbers are shorter.

Challenge: No. The Romans had **no symbol for zero** (O is just a letter). To show none, they would use a word meaning "nothing" or "none", or write nothing at all. Our 0 means "none" and also holds an empty place, as in 50.

Watch out for

- **Thinking O is a Roman zero.** There isn't one: the Roman symbols up to 100 are only I, V, X, L and C.
- **Thinking a digit always has the same value.** The 4 in 40 and in 4 are worth different amounts. Point to the tens and ones places.

Going further (5 minutes, no paper)

- **Zero hunt:** spot zeros around the house (on a clock, a phone, a price) and say what each 0 is doing.
- **Roman or not?** Look for Roman numerals in books (chapter numbers) or on clock faces.
- **In the game:** The Arena is a ten-round challenge that checks everything from all four chapters.