Factor pairs: answers and notes

What your child practised: finding every factor pair of a number, common factors and the highest common factor (Year 5 maths).

Page 1 · Warm up

yes · no · yes · no · yes

Page 2 · Try it together

24: **1 × 24, 2 × 12, 3 × 8, 4 × 6** (5 rows leaves 4 over). 13: only **1 × 13**.

Page 2 · A. Factors of 20

Ring **1, 2, 4, 5, 10, 20**. Not 3, 6, 8, 12, 15 or 40.

Page 2 · B. Rainbow for 28

Arcs join **1–28**, **2–14** and **4–7**.

Page 3 · C. Factor pairs

36: 2 × **18**, 3 × **12**, **4** × 9, 6 × **6**
30: 1 × **30**, **3** × 10, 5 × **6**
48: **1 × 48, 2 × 24, 3 × 16, 4 × 12, 6 × 8**

Page 3 · D. The diagram

12 only: **4, 12** · both: **1, 2, 3, 6** · 18 only: **9, 18**
Common factors 1, 2, 3, 6. Highest common factor **6**.

Page 3 · E. Bracelets

6 bracelets, each with **3 red** and **4 blue** beads. 6 is the highest common factor of 18 and 24.

Page 3 · Challenge

No. 32 is not a factor of 16: 16 ÷ 32 is not a whole number. 32 is a **multiple** of 16. A factor is never bigger than the number.

Watch out for

- **Missing a pair.** Children often jump about. Ask them to test 1, 2, 3, 4… in order and stop when the pairs meet.
- **Forgetting 1 and the number itself**, or writing 6 twice for 6 × 6 = 36.
- **Mixing up factors and multiples.** Factors go *into* a number (they are smaller or equal). Multiples are in its times table (they are equal or bigger).

Going further (5 minutes, no paper)

- **Factor of the day:** pick a house number or the date. How many factor pairs can your child say aloud?
- **Biggest list:** which number up to 30 has the most factors? (24 and 30 both have 8.)
- **In the game:** Chapter 2, Multiples Meadow, hops along times tables to find multiples and common multiples.