

Fact families and the link between + and –

WHAT THIS LESSON TEACHES

A fact family is the set of four number sentences from the same three numbers: two additions and two subtractions. The biggest number is the whole and the other two are the parts that make it.

→ From 3, 5 and 8: $3 + 5 = 8$, $5 + 3 = 8$, $8 - 3 = 5$, $8 - 5 = 3$.

→ In the 4, 6, 10 family, 10 is the whole and 4 and 6 are the parts.

MODEL THIS ON THE BOARD

FACT FAMILY FOR 2, 7 AND 9

- 1 The numbers are 2, 7 and 9. The whole is 9.
- 2 Write both additions: $2 + 7 = 9$ and $7 + 2 = 9$.
- 3 Write both subtractions: $9 - 2 = 7$ and $9 - 7 = 2$.
- 4 Read each sentence aloud to check the balance stays true.

DISCUSSION STARTER

REFLECT How does knowing one fact in a family help you write the other three?

ANSWER KEY

Scaffold: visual check on the page

Q1: $7 + 5 = 12$, $12 - 5 = 7$, $12 - 7 = 5$

- a) **Always** — There are always two additions and two subtractions that use the same three numbers.
- b) **Always** — The whole is the sum of the two parts so it must be the largest.

c) **Always** — The related addition and the two subtractions follow at once from the same three numbers.

d) **Sometimes** — Order does not matter as long as all four true sentences appear.

EXTENSION SHEET · STRETCH ANSWERS

S1: associative property