

The equals sign means balance

CURRICULUM ALIGNMENT

ALG.EXP.3 represent and express problems with known and unknown values in different ways to include the use of appropriate letter-symbols or words.

INTERACTIVES Balance Scales · challenge, display, explore

WHAT THIS LESSON TEACHES

The equals sign means the two sides are worth the same amount. It does not mean the answer comes next.

→ $3 + 4 = 7$ because both sides are worth 7, so a balance holding them would hang level.

→ 5 on one pan and $2 + 3$ on the other pan both make 5, so the beam stays level.

MODEL THIS ON THE BOARD

LEVELLING THE BUILDING PANS

- 1 See 6 cubes already on the left pan of the maker balance.
- 2 Build a matching set on the right pan with 4 cubes and then 2 more.
- 3 Both pans are now worth 6 so the beam hangs level and we write $6 = 4 + 2$.

DISCUSSION STARTER

REFLECT Does equals still mean 'the answer comes next', or something else now?

ANSWER KEY

Scaffold: visual check on the page

Q1: 7

Q2: $5 = 2 + 3$

Q3: $3 + 3$

Q4: $3 + 3$

Spot: Niamh treated equals as 'the answer comes next'. Equals means both sides ****balance****. $6 + 3 = 9$, so $\square + 2$ must also equal 9. $\square = 7$.

EXTENSION SHEET · STRETCH ANSWERS

S1: $x = 19$

S2: $x = 9$

S3: $x = 10$

S4: distributive property

S5: associative property