Lesson 113

# Using a box or a letter for the unknown

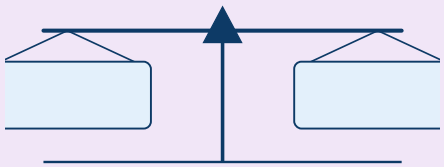
### FINDING A ON THE BALANCE BEAM

1. Look at the number sentence $a + 4 = 9$
2. The letter $a$ is the unknown we must find to level the beam
3. Slide weights until both sides match: try **5** + 4
4. Check: **5** + 4 = 9 so the beam hangs level
5. $a$ stands for **5** and we could rewrite it as □ + 4 = 9

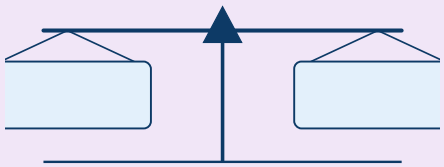
## WARM-UP

**Use the balance scales to make both sides equal for each sentence.**

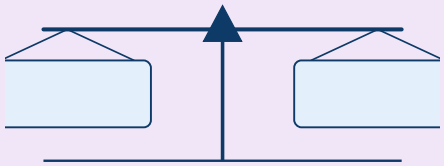
**1.** Place weights to balance $a + 1 = 8$ and mark what $a$ must be



**2.** Set the scales for □ + 3 = 9 and show the matching weight in the box



**3.** Balance the beam for 10 = c + 4 and write the value of c



## PRACTICE

1. In the classroom cupboard $a$ packs of paper plus **5** more packs make **11** packs in total. What number is $a$?

## ALWAYS, SOMETIMES, NEVER

**Always, sometimes or never true? Write A, S or N.**

**a.** A box and a letter used in the same place stand for the same unknown number. ☐

**b.** The letter n stands for the same number in n + 2 = 10 and n + 5 = 10. ☐

**c.** You can rewrite a letter sentence using a box and keep every number the same. ☐

**d.** A box cannot stand for an unknown number; only a letter can. ☐

ALGEBRA