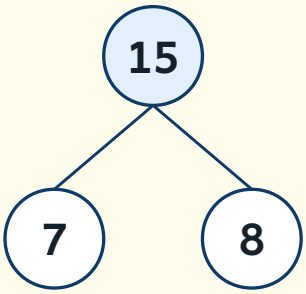
Lesson 116

Properties of operations — order and inverse links

ORDER AND INVERSE WITH 7 + 8

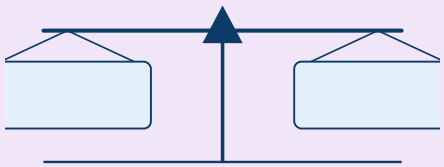
1. The bond shows 7 + 8 = **15**.
2. Swap the order: 8 + 7 also equals **15**.
3. Subtraction undoes it: 15 − 8 = **7**, so write 7 + 8 ↔ 15 − 8.



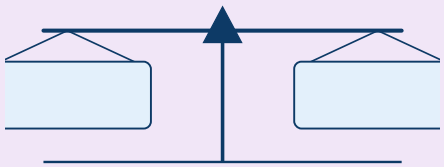
WARM-UP

Fill each blank pan so the balance scales stay level.

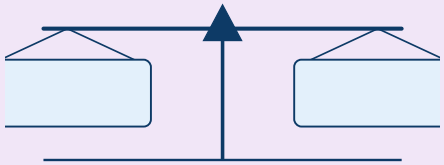
1. On the first scales, left pan shows 6 + 7 and right pan shows 7 + ____ , write the block that balances it



2. On the second scales, left pan shows 3 × 5 and right pan shows 5 × ____ , write the block that balances it



3. On the third scales, left pan shows 8 + 6 and right pan shows 14 − ____ , write the block that balances it



PRACTICE

1. On one game board the left pan holds **6** + **7** counters and the right holds **7** + ? counters. What must go in the blank so both pans balance?

ALGEBRA

ALWAYS, SOMETIMES, NEVER

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

a. Swapping the two numbers you add keeps the total the same, so 4 + 9 gives the same answer as 9 + 4. ☐

b. Swapping the two numbers you multiply keeps the answer the same, so 3 × 5 equals 5 × 3. ☐

c. Swapping the two numbers in a subtraction keeps the answer the same, so 10 − 4 equals 4 − 10. ☐

d. Subtraction undoes the addition, so if 8 + 6 = 14 then 14 − 6 = 8. ☐

x y

ALGEBRA

x y