Answers and talk notes

Equivalent Ratios

What your student is learning

Tonight we make and check equivalent ratios — ratios that mean the same thing — using multiplication and division.

Answers

Ask your student to explain before you look.

1. **C.** 4:10. 2 × 2 = 4 and 5 × 2 = 10, so 4:10 is equivalent to 2:5.
2. **B.** 2:3. 20 ÷ 10 = 2 and 30 ÷ 10 = 3, so the ratio is 2:3.
3. **C.** 15. 4 × 3 = 12, so the missing number is 5 × 3 = 15.
4. **B.** 4 cups juice, 10 cups soda. 4 cups juice, 10 cups soda is 2 × 2 and 5 × 2, so it tastes the same.
5. **C.** Yes, divide both 6 and 15 by 3. Yes, divide both 6 and 15 by 3 to get 2:5, so the ratios are equivalent.
6. **B.** 15:20. 3 × 5 = 15 blue tiles and 4 × 5 = 20 yellow tiles, so the ratio is 15:20.

Talk about it

How do you know 1:4 and your new ratio say the same thing?

Home mission

Pretend to make the soup at the table: 3 spoons of tomato to 2 spoons of broth. Ask your student: what would 4 times as much soup need? What if we only added 2 spoons to each? Does it taste the same?

When they are stuck, ask

- What is the scale factor? Let's divide the big number by the small one.
- Did we do the SAME operation to both numbers?
- Can we simplify to check — do both ratios reduce to the same thing?

Try not to say

- Add the scale factor to both numbers.
- Multiply just one of the numbers.
- When simplifying, divide each number by a different number.