What a Ratio Says

RP01-V1 · storyboard · RP01 Read and write a ratio. Read each picture with its sentences.

Picture 1

A pet shop has 8 dogs and 12 cats. Write the ratio of dogs to cats in simplest form.

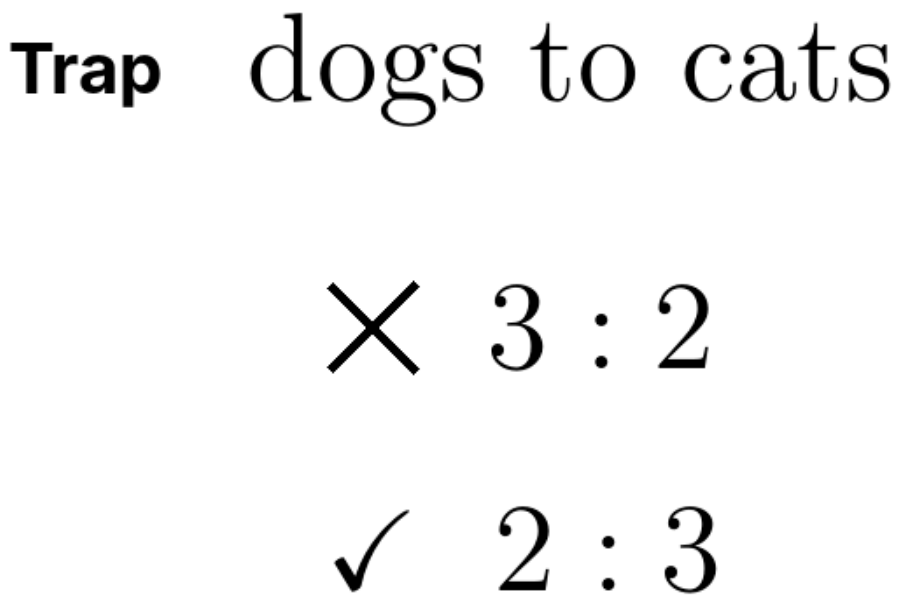
$$\text{dogs} : \text{cats} = 8 : 12$$ dogs first

$$8 \div 4 = 2, \quad 12 \div 4 = 3$$ divide both by 4

$$\boxed{\text{dogs} : \text{cats} = 2 : 3}$$ for every 2 dogs, 3 cats

1. A pet shop has 8 dogs and 12 cats.
2. Write the ratio of dogs to cats in simplest form.
3. Dogs to cats: the dogs come first, so 8 to 12.
4. Divide both numbers by 4, the largest number that divides both.
5. 8 divided by 4 is 2, and 12 divided by 4 is 3.
6. So dogs to cats is 2 to 3.
7. For every 2 dogs there are 3 cats.

Picture 2



8. Watch for the trap: the wrong order.
9. 3 to 2 would be cats to dogs.
10. In dogs to cats, the dogs come first.

Picture 3

The ratio of boys to girls in a club is $3 : 5$. There are 12 boys. How many girls are there?

$12 \div 3 = 4$ groups of 3 boys and 5 girls

$\boxed{4 \times 5 = 20}$ girls

Check: $12 : 20 = 3 : 5$ ✓

11. The ratio of boys to girls in a club is 3 to 5.
12. There are 12 boys.
13. How many girls are there?
14. The ratio doesn't say how many.
15. The club is made of groups, each with 3 boys and 5 girls, so 12 boys is 4 groups.
16. Each group has 5 girls: 4 times 5 is 20 girls.
17. Check: 12 to 20, divided by 4, is 3 to 5.

Picture 4

Trap $3:5,\ \ 12$ boys

$\times\ 12+2=14$ girls

$\checkmark\ \ 4\times 5=20$ girls

18. Watch for the trap: comparing by taking away.
19. 5 is 2 more than 3, but 14 girls is wrong.
20. Equal ratios come from multiplying: 20 girls.