Parts and the Whole

RP02-V1 · storyboard · RP02 Part to part and part to whole. Read each picture with its sentences.

Picture 1

The ratio of boys to girls in a class is $3 : 4$. What fraction of the class are girls?

$$3 + 4 = 7$$ students in one group

$$\text{girls} : \text{class} = 4 : 7$$ part to whole

$$\boxed{\frac{4}{7} \text{ of the class are girls}}$$

1. The ratio of boys to girls in a class is 3 to 4.
2. What fraction of the class are girls?
3. Each group has 3 boys and 4 girls: 7 students.
4. So 4 of every 7 students are girls.
5. Girls to the whole class is 4 to 7.
6. As a fraction: four sevenths of the class are girls.

Picture 2

Trap $\text{boys} : \text{girls} = 3 : 4$

$\times$ $\frac{3}{4}$ of the class are boys

✓ $\frac{3}{7}$ of the class are boys

7. Watch for the trap: reading part to part as a part of the whole.
8. Three quarters compares the boys with the girls.
9. Out of the whole class, the boys are 3 of every 7.

Picture 3

$\frac{7}{10}$ of the cast of a play are boys; the rest are girls. There are 21 boys. How many girls are there?

$$1 - \frac{7}{10} = \frac{3}{10}$$ girls

$$\text{girls} : \text{boys} = 3 : 7$$ part to part

$$21 \div 7 = 3$$ groups

$$\boxed{3 \times 3 = 9}$$ girls

10. Seven tenths of the cast of a play are boys, and the rest are girls.
11. There are 21 boys.
12. How many girls are there?
13. The rest are girls: three tenths of the cast.
14. In every 10, there are 3 girls and 7 boys.
15. So girls to boys is 3 to 7.
16. 21 boys is 3 groups of 7 boys.
17. Each group has 3 girls: 3 times 3 is 9 girls.

Picture 4

Trap $\frac{7}{10}$ are boys

$\times$ girls : boys $= 3 : 10$

$\checkmark$ girls : boys $= 3 : 7$

18. Watch for the trap: mixing up which ratio you have.
19. 3 to 10 compares the girls with the whole cast.
20. Girls to boys compares the girls with the boys: 3 to 7.