Share It Out

RP03-V1 · storyboard · RP03 Share a total in a ratio. Read each picture with its sentences.

Picture 1

Boys : girls $= 3 : 4$, and there are 84 students. How many girls are there?

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

$$84 \div 7 = 12$$ groups

$$\boxed{4 \times 12 = 48}$$ girls

$$\frac{4}{7} \times 84 = 48$$ the same, as a fraction

Check: $84 - 48 = 36, \quad 36 : 48 = 3 : 4$ ✓

1. The ratio of boys to girls is 3 to 4, and there are 84 students.
2. How many girls are there?
3. Each group has 3 boys and 4 girls: 7 students.
4. 84 divided by 7 is 12, so there are 12 groups.
5. Each group has 4 girls: 4 times 12 is 48 girls.
6. It is the same as a fraction: the girls are four sevenths of the class, and four sevenths of 84 is 48.
7. Check: 84 minus 48 is 36 boys, and 36 to 48 is 3 to 4.

Picture 2

Trap $84 \text{ students}, \quad 3 : 4$

$\times \; 84 \div 4 = 21$

$\checkmark \; 84 \div 7 = 12$

8. Watch for the trap: dividing by one number of the ratio.
9. Divide by the whole group, 3 plus 4, which is 7.

Picture 3

Ana and Ben share $120 in the ratio $5 : 3$. How much does Ana get?

$5 + 3 = 8$ shares

$\$120 \div 8 = \$15$ one share

$\boxed{5 \times \$15 = \$75}$ Ana

10. Ana and Ben share 120 dollars in the ratio 5 to 3.
11. How much does Ana get?
12. 5 plus 3 is 8 shares in all.
13. One share is 120 dollars divided by 8, which is 15 dollars.
14. Ana has 5 shares: 75 dollars.
15. Ben gets the other 45.

Picture 4

Trap $\text{Ana} : \text{Ben} = 5 : 3$

$\times \ \frac{5}{3} \times \$120$

✓ $\frac{5}{8} \times \$120 = \$75$

16. Watch for the trap: using part to part as a fraction of the total.
17. Five thirds compares Ana with Ben.
18. Ana gets five eighths of the money.