

Weekly Question (27.02.13)

Last year, there were boys and girls in a school choir. This year, some girls joined the school choir and the percentage of girls increased from 55% to 60%. If there were 54 girls in the school choir this year,

- (a) how many girls joined the school choir this year?
(b) What was the total number of students in the school choir last year?

Solution:

Method 1:

60% → 54 girls

20% → $54 \div 3 = 18$

40% (this year) → $18 \times 2 = 36$ boys

100% – 55% (girls) = 45% (boys)

45% (last year) → 36 boys

5% → $36 \div 9 = 4$

55% (last year) → $4 \times 11 = 44$ girls

$54 - 44 = 10$ girls (joined)

Total number of students → 36 boys + 44 girls = 80

- Ans: (a) 10 girls joined the school choir this year.**
(b) There were 80 students in the school choir last year.

Method 2:

$$55\% = \frac{55}{100} = \frac{11}{20}; 60\% = \frac{60}{100} = \frac{3}{5}$$

	Boys	: Girls
Last Year	9 = 18 units	: 11 : = 22 units
		+? units
This Year	2 = 18 units	: 3 : = 27 units

$27 - 22 = 5$ units

27 units → 54 girls

1 unit → 2

5 units → 10

$18 + 22 = 40$ units

40 units → $40 \times 2 = 80$

- Ans: (a) 10 girls joined the school choir this year.**
(b) There were 80 students in the school choir last year.