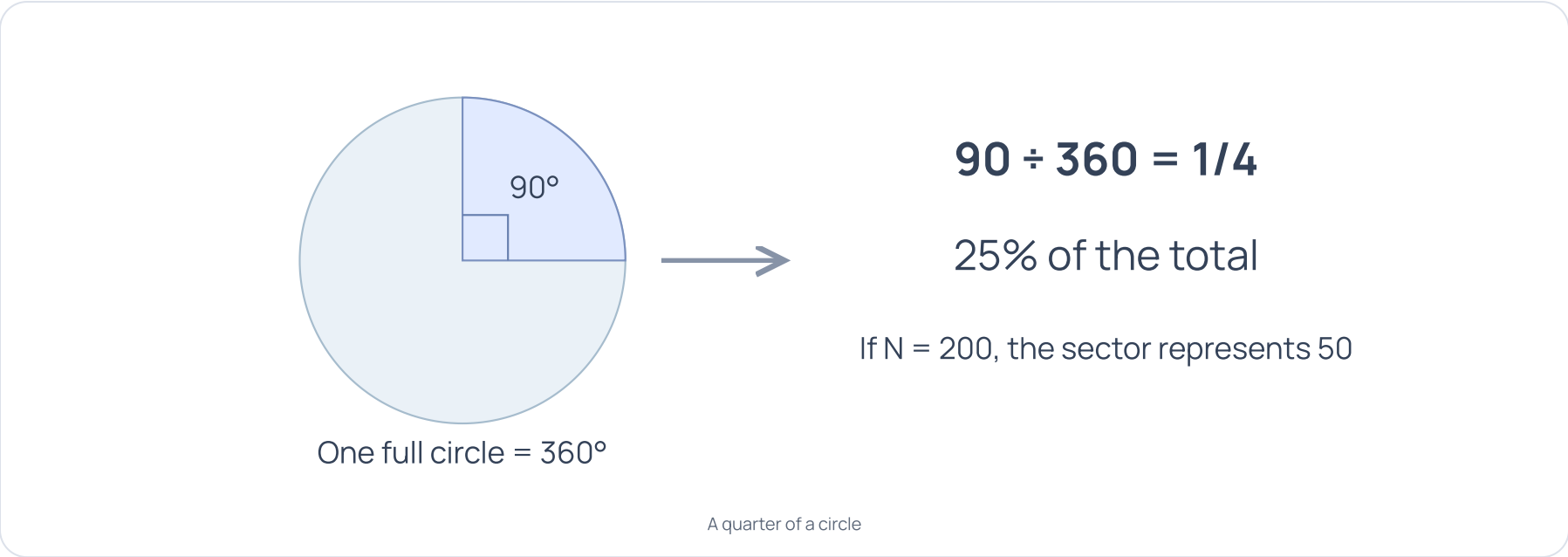


Pie charts: angle, share and count

Convert between 360° angles, 100% shares and actual counts across single or dual pie charts

• Pie Chart Conversions



◆ Angle, Percentage and Count

- One complete circle represents 360° or 100% of the total population N.
- Sector count = $N \times (\theta / 360^\circ) = N \times (p / 100)$; 1% of the circle equals 3.6°.
- For N = 1200, Bus (150°) + Car (45°) = 195°, giving $1200 \times 195/360 = 650$ students.

○ Ratios Within a Single Pie

- Within the same pie chart, the total N cancels out in any ratio or fraction between sectors.
- Bus + Car (195°) to Motorcycle + Bicycle (165°) simplifies directly as $195 : 165 = 13 : 11$.
- Motorcycle + Bicycle as a fraction of the whole is simply $165^\circ / 360^\circ = 11/24$.

◇ Comparing Across Two Pie Charts

- Across two pies with different totals N₁ and N₂, never compare percentages without their totals.
- Reduce the ratio of totals first: 24,700 : 27,300 divides by 1,300 to give 19 : 21.
- In Institute S, PG (21% of 24,700) to Grad (14% of 27,300) is $(19 \times 21) : (21 \times 14) = 19 : 14$.

□ Internal Switch vs New Entrants

- A switch between sectors keeps N fixed: 50 students out of 1200 equals $(50/1200) \times 360^\circ = 15^\circ$.
- When 50 Car users switch to Bicycle (75°), the new Bicycle angle is $75^\circ + 15^\circ = 90^\circ$.
- New entrants change the total: $(500 + 300)/(1200 + 300) = 8/15 = 53\frac{1}{3}\%$.

REMEMBER Cancel the total within a single pie, but always include the ratio of totals when crossing between two pies.