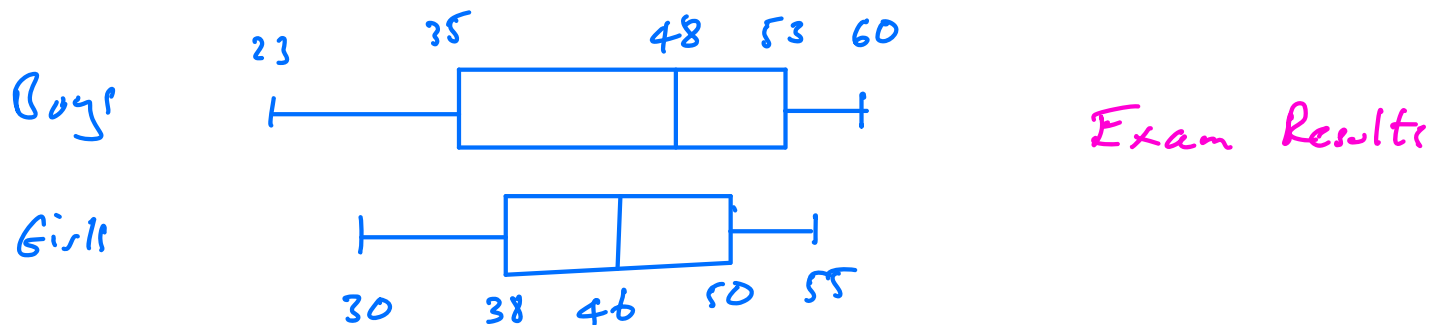


Comparing Distribution



On average the boys performed slightly better than the girls. Their median score was 48 compared to the girls median of 46.

The girls results were more consistent than the boys. They had an IQR of 12 ($50 - 38$) compared to the boys' IQR of 18 ($53 - 35$).

Multipliers

Bill is 20% taller than Alan. Colin is 10% taller than Bill.

How many percent taller than Alan is Colin.

Let Alan be x cm tall

Bill is $x \times 1.20$

Colin is $(x \times 1.2) \times 1.1$

$$= x \times 1.32$$

Colin is 32% taller than Alan

B is 25% heavier than A

C is 10% lighter than B

How many percent heavier than A is C

$$\text{Let } A = x$$

$$B = x \times 1.25$$

$$C = x \times 1.25 \times 0.9$$

$$C = x \times 1.125$$

C is $12\frac{1}{2}\%$ heavier than A

Exercise

Y is 40% heavier than X

Z is 15% heavier than Y

By what percentage is Z heavier than X

$$\text{Let } X = x$$

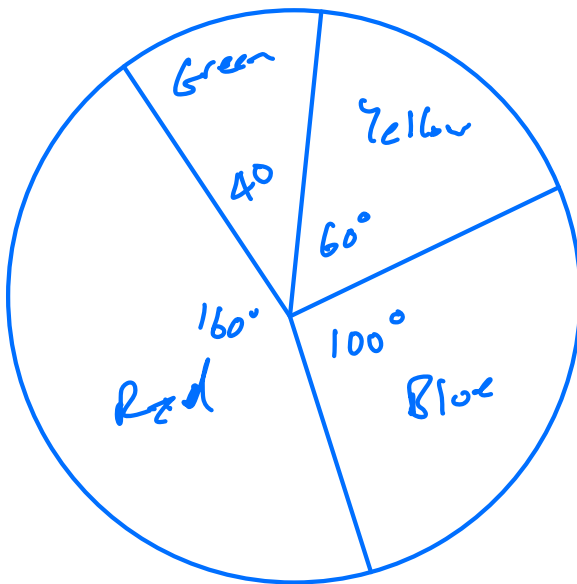
$$Y = x \times 1.4$$

$$Z = x \times 1.4 \times 1.15$$

$$Z = x \times 1.61$$

Z is 61% heavier than X

Pie Chart



180 cars

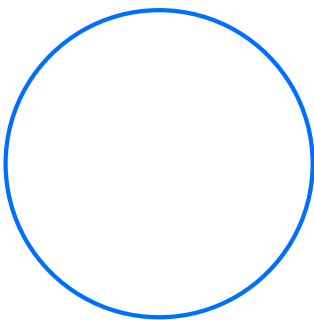
How many of each colour

$$\text{Yellow} = \frac{60}{360} \times 180 = 30$$

$$\text{Blue} = \frac{100}{360} \times 180 = 50$$

$$\text{Red} = \frac{160}{360} \times 180 = 80$$

$$\text{Green} = \frac{40}{360} \times 180 = 20$$



Labour	32,500
Tory	18,700
Lib	13,200
	<hr/>
	64,400

$$\text{Labour angle} = \frac{32500}{64400} \times 360 = 182^\circ$$

$$\text{Tory angle} = \frac{18700}{64400} \times 360 = 105^\circ$$

Lib

$$\frac{13200}{6400} \times 360 = \frac{74^{\circ}}{361^{\circ}}$$

Could round 182 down to 181
