



$$x : y = 2 : 5$$

Write down a formula for x in terms of y

$$5x = 2y$$

$$x = \frac{2}{5}y$$

Write as a single fraction.

$$\frac{x}{x-1} + \frac{4x}{x+5} = \frac{x(x+5) + 4x(x-1)}{(x-1)(x+5)}$$

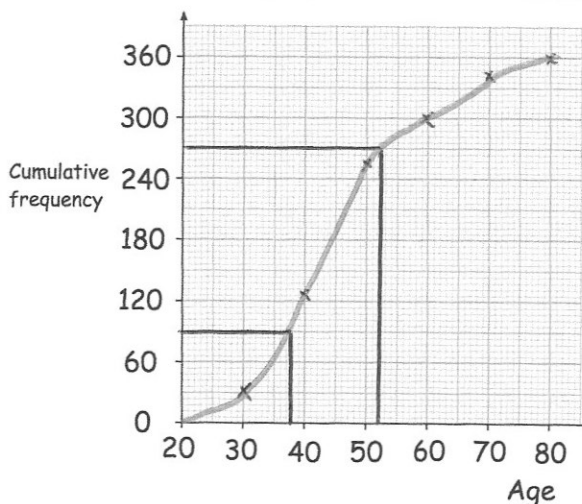
$$\frac{x^2 + 5x + 4x^2 - 4x}{(x-1)(x+5)}$$

$$\frac{5x^2 + x}{(x-1)(x+5)}$$

$$\frac{x(5x+1)}{(x-1)(x+5)}$$

Age, x years	Cumulative frequency
$20 < x \leq 30$	30
$30 < x \leq 40$	124
$40 < x \leq 50$	252
$50 < x \leq 60$	300
$60 < x \leq 70$	342
$70 < x \leq 80$	360

Draw a cumulative frequency graph



Use the graph to find an estimate of the interquartile range.

$$90^{\text{th}} \text{ (LQ)} = 37.5$$

$$270^{\text{th}} \text{ (UQ)} = 52$$

$$52 - 37.5 = 14.5$$

Work out $81^{\frac{3}{2}}$

$$\sqrt{81} = 9$$

$$9^3 = 729$$