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3.5 Comparing data

1) The daily total sunshine in Hurn is on average lower but has greater variability.

2) a) Year 8 $\Rightarrow \bar{X} = \frac{\sum x}{n}$

$$\bar{X} = \frac{94}{15} = 6.3 \text{ (2 s.f.)}$$

$$\sigma = \frac{\sum x^2}{n} - \left(\frac{\sum x}{n}\right)^2$$

$$\sigma = \sqrt{\frac{610}{15} - \left(\frac{94}{15}\right)^2}$$

$$\sigma = 1.2 \text{ (2 s.f.)}$$

Year 10 $\Rightarrow \bar{X} = \frac{79}{10}$

$$\bar{X} = 7.9$$

$$\sigma = \sqrt{\frac{688}{10} - \left(\frac{79}{10}\right)^2}$$

$$\sigma = 2.5 \text{ (2 s.f.)}$$

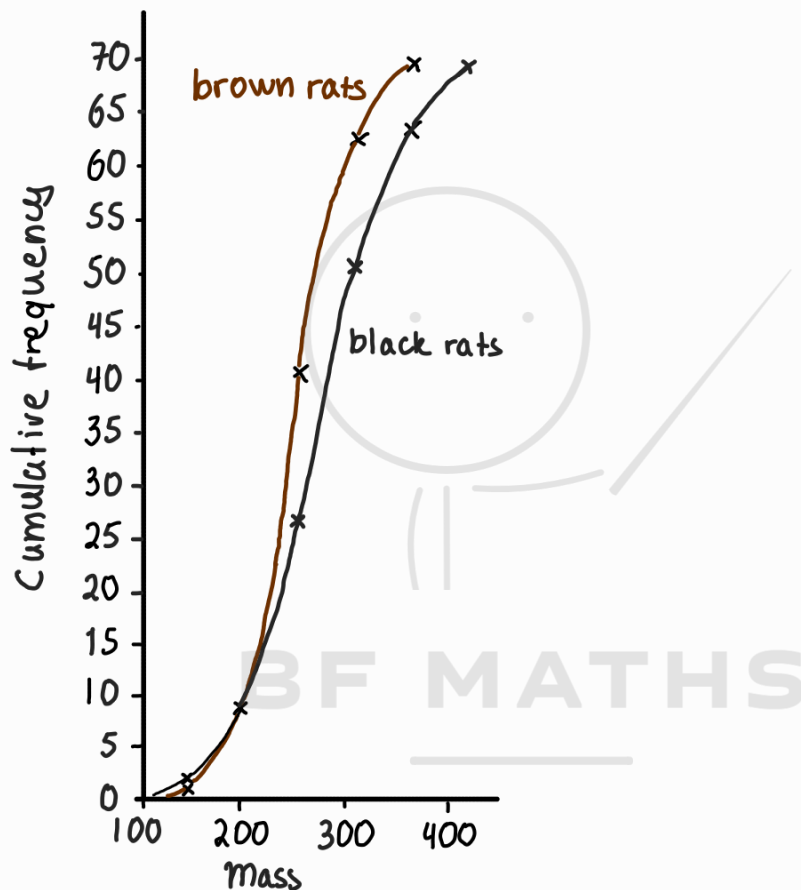
b) Year 10 has a higher average time and the times are more variable

3) a) Leuchars: slightly smaller interquartile range if the two outliers are ignored.

b) Yes: less variability in the gustiness of the wind for Camborne

4) Male otters are generally longer (median approximately 78 compared to 72) and females have greater variability in length (interquartile range approximately 15 compared to 11)

5) a)



b) Black rats

c) Brown rats