

**Paper Reference 1ST0/2H**  
**Pearson Edexcel**  
**Level 1/Level 2 GCSE (9–1)**

**Statistics**  
**Paper 2**  
**(Calculator)**  
**Higher Tier**

**Tuesday 18 June 2019 – Morning**

**Formulae Pages**

**V60683A**

# Higher Tier Formulae

$$\text{Skew} = \frac{3(\text{mean} - \text{median})}{\text{standard deviation}}$$

$$\text{Standard deviation} = \sqrt{\frac{1}{n} \sum (x - \bar{x})^2}$$

**An alternative formula for standard deviation is**

$$\text{standard deviation} = \sqrt{\frac{\sum x^2}{n} - \left(\frac{\sum x}{n}\right)^2}$$

## **Spearman's rank correlation coefficient**

$$r_s = 1 - \frac{6 \sum d^2}{n(n^2 - 1)}$$

## **Rates of change**

**(e.g. Crude birth rate =**

$$\frac{\text{number of births} \times 1000}{\text{total population}})$$