

1. 33, 45, 5, 31, 50, 85

$$\text{RANGE} = \text{LARGEST VALUE} - \text{SMALLEST VALUE}$$

$$= 85 - 5$$

$$= 80$$

2. 5, 10, 23, 2

$x_i$	$x_i - \bar{x}$	$(x_i - \bar{x})^2$
5	$5 - 10 = -5$	$(-5)^2 = 25$
10	$10 - 10 = 0$	$(0)^2 = 0$
23	$23 - 10 = 13$	$(13)^2 = 169$
2	$2 - 10 = -8$	$(-8)^2 = 64$
<u>40</u>		<u><math>\sum (x_i - \bar{x})^2 = 258</math></u>

$$\bar{x} = \frac{40}{4} = 10$$

$$\begin{aligned}
 S &= \sqrt{\frac{\sum (x_i - \bar{x})^2}{n-1}} \\
 &= \sqrt{\frac{258}{4-1}} \\
 &= \sqrt{\frac{258}{3}} \\
 &= \sqrt{86} \\
 S &= 9.3
 \end{aligned}$$

2. 5, 10, 23, 2

$x_i$	$x_i^2$
5	$(5)^2 = 25$
10	$(10)^2 = 100$
23	$(23)^2 = 529$
2	$(2)^2 = 4$
<u><math>\sum x = 40</math></u>	<u><math>\sum x^2 = 658</math></u>

$$\begin{aligned}
 S &= \sqrt{\frac{n \sum (x^2) - (\sum x)^2}{n(n-1)}} \\
 &= \sqrt{\frac{4(658) - 40^2}{4(4-1)}} \\
 &= \sqrt{\frac{1032}{12}}
 \end{aligned}$$

$$S = 9.3$$

$$S^2 = 86 \quad \sigma^2$$

3.  $\sigma = 2$

$$\mu = 10$$

$$CV = \frac{2}{10} \cdot 100\%$$

$$= 20\%$$