Self-assessment answers: 21 Summarising data

1. Mean = 56.4, Variance = 653 *[3 marks]*

2. Mean = 3.94 m, Standard deviation = 0.977 m *[4 marks]*

3. Standard deviation = $\sqrt{\frac{201.7}{12} - \left(\frac{47}{12}\right)^2} = 1.21$ *[5 marks]*

4. (a)

Time in minutes (t)	**Frequency**
$6 < t \leq 10$	6
$10 < t \leq 15$	6
$15 < t \leq 20$	10
$20 < t \leq 30$	16
$30 < t \leq 45$	7

(b) Mean= 21.3 min, Variance = 82.8 min^2

(c) Actual data values are not given, only groups. *[10 marks]*

5. Total score before new student = $34.5 \times 8 = 276$

Total score after new student = $276 + 38 = 314$

Mean score after new student = $\frac{314}{9} = 34.9$

Sum of squared scores before new student $8 \times (5.75 + 34.5^2) = 9568$

Sum of squared scores after new student = $9568 + 38^2 = 11012$

Variance after new student = $\frac{11012}{9} - 34.9^2 = 6.32$ *[8 marks]*