

Exercise 2C

1 a $351 - 400$

$$\begin{aligned}
 \text{b } & \frac{(200 \times 4) + (263 \times 8) + (325.5 \times 18) + (375.5 \times 28) + (450.5 \times 7)}{65} \\
 &= \frac{800 + 2104 + 5859 + 10514 + 3153.5}{65} \\
 &= \frac{22430.5}{65} \\
 &= 345.08
 \end{aligned}$$

c There are 65 observations so the median is the 33rd. The 33rd observation will lie in the class 351–400.

2 a $\frac{(67 \times 1) + (72 \times 4) + (77 \times 6) + (82 \times 6) + (87 \times 8) + (92 \times 4) + (97 \times 1)}{30} = \frac{2470}{30} = 82.3$ decibels

b The answer is an estimate because you don't know the exact data values.

4 Store A $\frac{(20.5 \times 5) + (30.5 \times 16) + (40.5 \times 14) + (50.5 \times 22) + (60.5 \times 26) + (70.5 \times 14)}{97}$

$$= \frac{4828.5}{97} = 50 \text{ years}$$

Store B $\frac{(20.5 \times 4) + (30.5 \times 12) + (40.5 \times 10) + (50.5 \times 28) + (60.5 \times 25) + (70.5 \times 13)}{92}$

$$= \frac{4696}{92} = 51 \text{ years}$$

Store B employs older workers but not by a great margin.