Solutions

Award method and answer marks as indicated; accept equivalent correct methods.

2.1

- $N = 2.5(8) =$ **20** books.

2.2

- $\theta = (15/60)360 =$ **90**°.

2.3

- **Stem 1: leaves 4,7,7; stem 2: leaves 1,3; key** $1|4 = 14$.

2.4

- Add components: $H = 12 + 9 =$ **21** units.

3.1

(a)

- $N = 40$; $\theta_W = 108°$, $\theta_C = 72°$, $\theta_B = 180°$.

(b)

- **Three labelled sectors of** $108°, 72°, 180°$, drawn with a protractor.

(c)

- **Paired bars of heights (12,10), (8,14), (20,16)** for walk, cycle, bus; equal widths, common frequency scale and a class legend.

3.2

(a)

- One symbol represents $k = 30/3.75 =$ **8** pupils.
- Total is 60 pupils, so angles are **180°, 120°, 60°** for walkers, bus, cyclists respectively.
- Their sum is 360°.

(b)

- Stem 1 has ordered leaves **2, 2, 7, 7**; stem 2 has **1, 3**.
- Key **1 | 2 = 12 minutes**.
- Middle values are 17 and 17, so median **17 minutes**.

3.3

- Each person has $360° \div 72 = 5°$.
- $110 \div 5 =$ **22** people.

3.4

- 11 values, so the median is the 6th: counting 15, 17, 18, 20, 23, 23 gives median **23** years.
- Range $= 42 - 15 =$ **27** years.