

Solutions

Marking: **M1** a correct method, **A1** the correct answer.

Each answer shows the steps, then the **result**.

2.1

- the class width is 20, so $30 \div 20$
 $= \mathbf{1.5}$

2.2

- frequency = density $\times$ width = 2.4×5
 $= \mathbf{12}$

2.3

- the classes have unequal widths
- using density makes the AREA of each bar proportional to its frequency, so a wide class is not made to look more common than it is

3.1

(a)

- widths are 10, 15, 20 and 30
- $15 \div 10 = \mathbf{1.5}$
- $30 \div 15 = \mathbf{2}$
- $24 \div 20 = \mathbf{1.2}$ and $18 \div 30 = \mathbf{0.6}$

(b)

- the modal class has the greatest frequency DENSITY, which is 2

$$\mathbf{10 < t \leq 25}$$

- it is not the class with the greatest frequency in this table — $25 < t \leq 45$ has a frequency of 24 but a density of only 1.2

3.2

- width = 10, so frequency = 3.5×10
 $= \mathbf{35}$