

Solutions

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

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

2.1

- look only at the 12 dog owners

$$\frac{5}{12}$$

2.2

$$P(B \mid A) = \frac{P(A \cap B)}{P(A)} = \frac{0.2}{0.5} = \mathbf{0.4}$$

2.3

- look only at the 24 walkers

$$\frac{9}{24} = \frac{\mathbf{3}}{\mathbf{8}}$$

3.1

(a)

$$\frac{5}{8} \times \frac{3}{7} = \frac{\mathbf{15}}{\mathbf{56}}$$

(b)

- $P(\text{red, red}) = \frac{5}{8} \times \frac{4}{7} = \frac{20}{56}$
- $P(\text{blue, blue}) = \frac{3}{8} \times \frac{2}{7} = \frac{6}{56}$
- total $\frac{26}{56} = \frac{\mathbf{13}}{\mathbf{28}}$