Solutions

Marking: **K** knowledge, **App** use of the case or data, **An** analysis (a chain of reasons: cause, then effect), **Ev** evaluation (a judgement with a reason). In calculations, **M1** is for the method and **A1** for the answer; **B1** is an independent mark.

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

2.1

(a) secondary, quantitative; (b) primary, qualitative

(c) secondary, quantitative; (d) primary, quantitative

2.2

$\dfrac{408}{5{,}000} = \mathbf{8.2}\%$

those who reply (often loyal regulars) may differ from the rest, so the results may be biased

2.3

$SE = \sqrt{\dfrac{0.45 \times 0.55}{300}} = 0.0287$

margin $1.96 \times 0.0287 = 0.056$

[**39.4**%, **50.6**%]

2.4

leading: it pushes the answer "yes"

double-barrelled: tasty, healthy and value at once

e.g. "How would you rate the value of our meals for the price? (1 = very poor, 5 = very good)"

3.1

(a) **8.2**%

(b) $SE = \sqrt{\dfrac{0.62 \times 0.38}{408}} = 0.024$; margin 0.047; [**57.3**%, **66.7**%]

(c) those who replied are likely to be keen regulars (non-response bias); saying "I would try" costs nothing, while buying costs £29

(d) an A/B test: offer the bundle to a random group and measure how many buy

3.2

(a) 13.5% and 4.0%; uplift **9.5** points

(b) so the two groups are alike in every other way; then the difference can be put down to the offer, not to who was chosen

(c) far below: what people do is much less than what they say

3.3

(a) $\dfrac{1{,}200}{24} = £\mathbf{50}$; $\dfrac{800}{400} = £\mathbf{2}$

(b) **5–6**: focus groups give reasons and words for the message, but 24 people cannot give a share (An); the survey is cheap and gives a share, but measures intent (An); the pilot measures real buying and retention, the numbers the business case needs (App); judgement with a reason, e.g. survey plus pilot (£3,300 is over budget, so pilot plus a short qualitative step, or survey then a smaller pilot) (Ev). **3–4**: one option analysed, or no clear judgement. **1–2**: relevant points.

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