

University Business

Name: _____ Score: _____

1. $p = 0.62$, $n = 408$. The half-width of the 95% interval, in percentage points (one decimal)?
_____ pp
2. 179 of 408 respondents are busy professionals. The share, in % (nearest whole)?
_____ %
3. Takeaway avoided 35 pounds; bundle price 29. The visible economic surplus, in pounds?
_____ £
4. Bundle 29 for 5 meals, variable cost 3.10 a meal. The CM per meal, to two decimals?
_____ £
5. Shelf 6.50, retailer margin 30%. What Nimbus receives and the CM per meal?
_____ £ CM
6. A headline rewrite lifts CTR from 1.8% to 2.6% and the trial rate falls from 15.0% to 11.8%. Net effect on trials?
☐ cannot be computed
☐ the trial rate is irrelevant
☐ clearly better: CTR is the goal
☐ about the same or worse - and the wrong visitors now pollute every later metric
7. Operations delivers 94% by 6 pm. Which ad line is right?
☐ "never late" - bolder
☐ "delivered by 6 pm, 94% of the time" - the number the evidence carries
☐ "always by 6 pm" - aspirational
☐ no claim at all - hide the metric
8. Intent 62%; the A/B offer to 200 converts 27 (13.5%). The honest reading?
☐ stated intention overstates purchase - the behavioural number governs
☐ the survey was wrong and should be discarded
☐ the A/B test was unlucky; trust 62%
☐ average them: about 38%
9. Why is the 126,000 annual figure called a ceiling, not a forecast?

- ☐ it assumes full retention and the stated conversion - the funnel will discount both
- ☐ it is the wrong arithmetic
- ☐ it includes the fitness segment by mistake
- ☐ it ignores the price

10. Why does the campaign lead with augmented features rather than the meals themselves?

- ☐ core benefits sell better
- ☐ the meals are not good
- ☐ augmented features are cheaper
- ☐ the augmentation takes years of systems to copy; a meal takes a quarter

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1. **4.7 pp**

$1.96\sqrt{0.62 \times 0.38/408} = 0.047 \rightarrow$ the interval is [57.3%, 66.7%].

2. **44 %**

$179/408 = 43.9\%$ - the largest block, and it passes all three criteria.

3. **6 £**

$35 - 29 = \text{£}6$ visible, plus time and mental-load benefits - the ceiling a price rise could capture part of.

4. **2.7 £**

$29/5 = 5.80$ effective; $5.80 - 3.10 = \text{£}2.70$ - the subscription's engine.

5. **1.45 £ CM**

Nimbus receives $6.50 \times 0.70 = \text{£}4.55$; $\text{CM} = 4.55 - 3.10 = \text{£}1.45$.

6. **about the same or worse - and the wrong visitors now pollute every later metric**

Clicks rise to $120,000 \times 0.026 = 3,120$; at 11.8% of (approx.) visits, trials do not improve - and the cohort quality drops. Gameable metrics trade tomorrow for today.

7. **"delivered by 6 pm, 94% of the time" - the number the evidence carries**

An absolute claim plus one 6:15 delivery equals a false ad. The honest claim is not the cautious one; it is the substantiable one - and the rate itself signals candour.

8. **stated intention overstates purchase - the behavioural number governs**

The intent-to-behaviour gap is the most replicated finding in the field: use the survey to aim, the experiment to decide.

9. **it assumes full retention and the stated conversion - the funnel will discount both**

$180 \times 0.27 \times 5 \times 2.70 \times 52$ is the full-retention ceiling; unit 7.6's real funnel (15% trial, churn) does the discounting.

10. **the augmentation takes years of systems to copy; a meal takes a quarter**

Defensibility lives where copying is slow - slot logistics, subscription systems, trust. Product policy follows the moat.