Solutions

Marking: **M1** a correct method, **A1** the correct answer, **B1** an independent mark.

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

2.1

a correlation only shows that the two variables move together; unhappy teenagers may use social media more (reverse direction), or a third variable such as loneliness may affect both

2.2

the link is real but very small: more than 99 % of the differences in well-being come from other factors; about the same as eating potatoes, so it is not a major cause; and the data are correlational, so even this small link may not be cause

2.3

Ward et al. (2017); students did working-memory tests with their phone on the desk face down and silent, in a bag, or in another room; they did best with the phone in another room, although they did not use it; suggests the phone's presence uses up attention; later studies did not always repeat the effect

2.4

award up to [6]: Ward et al. (2017): working memory was best with the phone in another room; so phones kept outside the room may free attention for learning; but later studies did not always repeat this, so the effect may be small or uncertain; Sparrow et al. (2011): people remember less when they expect to look things up, so less reliance on phones in class could help memory; but phones can support learning, e.g. dictionaries and calculators; the school should test the ban, e.g. compare results before and after, and involve students (autonomy)

3.1

Mark with the markbands: [13-15] focused on the claim, accurate knowledge, evidence used to build an argument, the concept used to evaluate throughout, a supported conclusion; [10-12] mostly focused, evidence used, some evaluation through the concept; [7-9] relevant knowledge but mostly description; [4-6] limited knowledge, little evaluation; [1-3] little that is relevant. Points that may be included: Orben and Przybylski (2019): a negative link, but at most 0.4 % of the variation; large samples give confidence that the link exists but show it is small; causality: correlational data cannot show direction: unhappy teenagers may use more social media; third variables such as sleep, loneliness or family problems could affect both; experiments that reduce use for a short time could test cause, but they are short and participants know the aim; measurement: self-reported hours are often inaccurate, and "social media" covers many different activities; the effect may differ between individuals: harmful for some, helpful for others; conclusion: the evidence supports a small link for the average teenager, but not a strong causal claim

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