



H23-10min Pilot Surveys (Higher): 10-minute Pack

EDEXCEL 1ST0 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** A leisure centre is designing a questionnaire to find out what members think of its facilities. One draft question is shown below.

Draft pilot questionnaire - Question 2	
"Don't you agree that our fantastic new gym equipment has made your workouts much more enjoyable?"	
☐ Yes	☐ No

- (a) State the type of problem with this question. (1)
- (b) Explain why this is a problem to identify during a pilot survey. (1)
- (c) Rewrite the question so that it is no longer leading. (2)

(Total for Question 1 is 4 marks)

2 A clothing retailer posts a pilot questionnaire to 60 customers. 51 completed questionnaires are returned.

(a) Work out the response rate for this pilot survey, as a percentage. **(2)**

.....
(b) State whether a response rate of 85% would generally be considered high or low **(1)**
for a survey, giving a reason.

(Total for Question 2 is 3 marks)

3 An ecologist is developing a method for estimating the number of ladybirds in a meadow, using a timed sweep-net count within a marked 5-metre square quadrat. Before her main survey of several meadows, she pilots this counting method on one afternoon in June.

(a) State one practical problem, unrelated to question wording, that this pilot might reveal about the counting method. **(1)**

(b) State a different practical problem, relating to the equipment or amount of time used. **(1)**

(c) Explain how identifying problems like these during the pilot could improve the main survey. **(2)**

(Total for Question 3 is 4 marks)

Mark scheme • H23-10min Pilot Surveys (Higher): 10-minute Pack

Question 1

- (a) **B1** it is a leading question cao
- (a) **Answer: It is a leading question.**
- (b) **B1** it pushes/encourages members towards agreeing, so responses would be biased and not reflect members' true opinions, oe
- (b) **Answer: The wording pushes members towards agreeing, so the results would be biased and would not show what members really think.**
- (c) **B1** no longer contains wording that suggests an expected answer
- (c) **B1** remains clear and answerable, e.g. offers a genuine scale of response
- (c) **Answer: e.g. "What do you think of the new gym equipment?" with response options Much better, Better, About the same, Worse, Much worse.**

Question 2

- (a) **M1** 51/60, oe
- (a) **A1** 85% cao
- (a) **Answer: 85 %**
- (b) **B1** high, with an acceptable reason, e.g. most people who received a questionnaire returned it (51 out of 60)
- (b) **Answer: High. Most of the customers who were sent a questionnaire (51 out of 60) returned it.**

Question 3

- (a) **B1** e.g. weather conditions on the day (wind, rain or temperature) affect how many ladybirds are active/visible, so counts vary for reasons unrelated to the true population, oe
- (a) **Answer: Weather conditions on the day, such as wind or rain, affect how many ladybirds are active and visible, so the count could vary for reasons that have nothing to do with the true population size.**
- (b) **B1** e.g. the sweep net may be difficult to use accurately in the time allowed, or small ladybird larvae may be hard to identify and count quickly, oe
- (b) **Answer: The time allowed may not be long enough to sweep the whole quadrat accurately, or small ladybird larvae may be hard to identify and count quickly enough.**
- (c) **B1** problems found can be corrected (e.g. choosing calmer days, allowing more time, using clearer identification guides) before the main data collection takes place
- (c) **B1** this makes the counts from the main survey more consistent/reliable and comparable between different meadows, oe
- (c) **Answer: Problems found in the pilot, such as poor weather or rushed identification, can be fixed before the main survey, for example by choosing calmer days or allowing more time. This makes the counts from the main survey more consistent and fair to compare between meadows.**