1.11 User-centred design: Test Pack

AQA 8552 · Calculator allowed · about 15 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

1 Fictional interview coding for a reusable lunch container recorded these needs: 8 of 10 pupils wanted one-hand opening; 6 wanted it to fit a 180 mm wide lunch bag; 4 mentioned colour choice. Give the percentage prioritising one-hand opening and identify the strongest need. State the sample limitation.

(Total for Question 1 is 3 marks)

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2 Fictional trial of two adjustable laptop risers tested by 10 users each. Requirement: height adjustment 80 to 140 mm and no tipping while supporting a 2 kg laptop. Prototype A adjusts 80 to 130 mm and 2 users report wobble; B adjusts 85 to 145 mm and 1 user reports wobble. Evaluate which is closer to the requirements and recommend changes and a retest. Both passed a static 2 kg load.

(Total for Question 2 is 5 marks)

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3 Fictional interviewees for a school locker organiser (9 pupils) ranked access and capacity. 7 wanted a pencil pocket reachable without removing books; 6 wanted at least 4 pens stored; 2 wanted a name label. Draft two measurable requirements, then explain which should be checked during a use trial.

(Total for Question 3 is 4 marks)

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Mark scheme · 1.11 User-centred design: Test Pack

Question 1

8 / 10 x 100	**M1**
80%	**A1**
One-hand opening is strongest among these interviewed pupils; this small fictional group cannot represent all pupils.	**B1**

Answer: 80%; one-hand opening is the strongest stated need in this sample, though 10 interviews cannot establish all pupils' needs.

Question 2

Both support 2 kg, but both fail to cover the full required adjustment range	**B1**
A misses 140 mm by 10 mm; B misses 80 mm by 5 mm; B has fewer wobble reports but neither is compliant	**B1**
Recommend extending selected range to include 80 and 140 mm and improve stability	**M1**
Retest adjustment endpoints and a 2 kg load with repeated user trials recording wobble.	**A1**
Neither wobble sample proves universal performance; compare repeated trials under the same conditions.	**B1**

Answer: Neither fully meets the 80 to 140 mm range. B has one wobble report versus A two, and covers more of the range, but it needs a lower endpoint of 80 mm. Retest both endpoints under a 2 kg load and record user wobble reports.

Question 3

A pencil pocket must be reachable while books remain in the organiser.	**B1**
It must hold at least 4 pens.	**B1**
Trial with books loaded and have users retrieve a pencil, then count stored pens; this checks the stated functional needs.	**A1**
A counted capacity test complements the user access trial.	**B1**

Answer: The organiser must allow pencil retrieval with books still loaded and hold at least 4 pens. A use trial checks access directly; the four-pen capacity can also be counted.

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