



## F10-test Spreadsheets and ICT (Foundation): Test Pack

EDEXCEL 1ST0 · Calculator allowed · about 15 minutes

Total Marks

Name: \_\_\_\_\_ Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**Answer ALL questions. Show all your working.**

**1** For each statement about spreadsheets, write down whether it is True or False.

**(i)** A formula typed into a spreadsheet cell must begin with an equals sign (=). **(1)**

.....

**(ii)** Once a number has been typed into a spreadsheet cell, it can never be changed afterwards. **(1)**

.....

**(Total for Question 1 is 2 marks)**

- 2** A student records, in a spreadsheet, the number of pupils who chose each of 4 sports as their favourite.

| Sport     | Number of pupils |
|-----------|------------------|
| Football  | 12               |
| Swimming  | 6                |
| Athletics | 5                |
| Rugby     | 7                |

She highlights this data and uses the spreadsheet's chart tool to produce a chart.

- (a) State the type of chart that would be most appropriate for this data: a bar chart, a line graph, or a scatter graph. (1)
- (b) Give a reason for your answer to part (a). (1)
- (c) A second student says a pie chart would also be a suitable way to display this data, because it can show each sport as a proportion of the 30 pupils asked. Is the second student correct? Give a reason. (1)

(Total for Question 2 is 3 marks)

**3** A market research company plans to find out how often people in a town use public transport. They will use ICT, such as a spreadsheet, at different stages of the statistical enquiry cycle: plan, collect, process and interpret.

**(a)** Give one way ICT could be used at the collect stage of this enquiry. **(1)**

**(b)** Give one way ICT could be used at the process stage of this enquiry. **(1)**

**(c)** Give one way ICT could be used at the interpret stage of this enquiry. **(1)**

**(d)** Give one limitation of relying on ICT during this enquiry. **(1)**

**(Total for Question 3 is 4 marks)**

- 4** A shopkeeper uses a spreadsheet to add VAT to the price of items. Cell F1, elsewhere on the sheet, holds the VAT rate as a decimal, 0.2. Column A holds the item name, column B holds the price before VAT (£), and column C is used to calculate the price including VAT.

| Item    | Price before VAT (£) |
|---------|----------------------|
| Kettle  | 25.00                |
| Toaster | 18.00                |
| Blender | 32.00                |

(Kettle is in row 2, Toaster in row 3, Blender in row 4.)

- (a)** Write down a formula that could be typed into cell C2 to work out the price of the kettle including VAT, using an absolute reference to cell F1. (2)

- 
- (b)** This formula is copied down from cell C2 into cells C3 and C4. Explain why the reference to cell F1 must be absolute (contain \$ signs) for this to work correctly. (2)

- (c)** Work out the value that would appear in cell C4 (the price of the blender including VAT). (2)

---

**(Total for Question 4 is 6 marks)**

# Mark scheme • F10-test Spreadsheets and ICT (Foundation): Test Pack

---

## Question 1

- (i) **B1** True cao
- (i) **Answer: True**
- (ii) **B1** False cao
- (ii) **Answer: False**

## Question 2

- (a) **B1** bar chart cao
- (a) **Answer: Bar chart**
- (b) **B1** valid reason, e.g. the sports are categories, not points in time or paired numerical values, so a line graph or scatter graph would not be suitable
- (b) **Answer: A line graph is for data collected over time and a scatter graph is for pairs of numerical values, but sport is a category, so neither would be suitable here.**
- (c) **B1** Yes, with a valid reason, e.g. the data is categorical and the frequencies add up to a total (30 pupils), so a pie chart can show each sport's share of that total
- (c) **Answer: Yes. Because the sports are categories that add up to a total of 30 pupils, a pie chart can show each sport's share of the whole group.**

## Question 3

- (a) **B1** any valid use, e.g. an online survey/questionnaire gathers responses directly into a spreadsheet or database
- (a) **Answer: An online questionnaire could collect people's answers directly into a spreadsheet.**
- (b) **B1** any valid use, e.g. a named function such as SUM or AVERAGE calculates a total or the mean number of journeys
- (b) **Answer: A spreadsheet function such as AVERAGE could calculate the mean number of journeys per person.**
- (c) **B1** any valid use, e.g. a chart/graph produced from the spreadsheet data helps to identify patterns or trends
- (c) **Answer: A chart produced from the spreadsheet data could help show which age groups use public transport most.**
- (d) **B1** any valid limitation, e.g. data entered wrongly or a formula containing an error could lead to a wrong conclusion if nobody checks it
- (d) **Answer: If the data is typed in wrongly, or a formula has an error, the conclusions could be wrong unless someone checks the results.**

## Question 4

- (a) **B1** correct structure, e.g.  $=B2*(1+F1)$  oe (accept  $=B2+B2*F1$ )
- (a) **B1** the reference to F1 is written as an absolute reference,  $\$F\$1$
- (a) **Answer:  $=B2*(1+\$F\$1)$**
- (b) **B1** without \$ signs, the reference would change/shift when copied down, e.g. to F2 then F3
- (b) **B1** F2 and F3 are empty, so the copied formulas would give the wrong answer (e.g. zero VAT) instead of using the rate in F1
- (b) **Answer: Without the \$ signs, the reference would shift down to F2 and then F3 as the formula is copied, and those cells are empty, so the toaster and blender would be given the wrong price instead of using the VAT rate in F1.**
- (c) **M1**  $32 \times 1.2$ , oe
- (c) **A1** 38.40 cao (accept 38.4)
- (c) **Answer: 38.40**