Your notes

KS3 Computing: revision notes

Spreadsheets and data

Contents

1. Cells and formulas
2. Copying formulas
3. Charts and formatting
4. Modelling
5. Key terms
6. Quick questions
7. What to do next

Cells and formulas

- A spreadsheet is a grid of **cells**. Each **cell** has a reference made of its column letter and row number, such as B3. A **range** such as A1:A10 means all the cells from A1 to A10.
- **Formulas** start with an equals sign: =B2+C2, =B2*C2 or =A1/2.
- **Functions**: =SUM(A1:A10) adds up a **range**, =AVERAGE(B2:B20) finds the mean, =MAX() and =MIN() find the largest and smallest values, and =COUNT() counts **cells** with numbers.
- =IF(B2>=50,"Pass","Fail") shows "Pass" if B2 is 50 or more, and "Fail" if it isn't.

Copying formulas

- Fill a **formula** down to copy it. **Relative references** change as they are copied: =A1*2 becomes =A2*2 in the next row.
- **Absolute references**, written with dollar signs such as B1, stay the same when copied, for example for a fixed price or rate.

Charts and formatting

- Bar charts compare categories, line graphs show change over time, and pie charts show parts of a whole. Give every chart a title and labelled axes.
- Sorting puts data in order; filtering shows only the rows that match a rule.
- **Conditional formatting** changes a **cell**'s colour automatically, such as turning marks below 50 red.
- **Data validation** stops wrong data being entered, such as allowing only numbers from 1 to 100.

Modelling

- A spreadsheet **model** uses **formulas** to represent a real situation, such as the budget for a school trip.
- "What if" questions change the input values to see how the results change, such as the cost per student if more students go.

Key terms

Cell	A single box in a spreadsheet.
Cell reference	The column letter and row number of a cell, such as B3.
Range	A group of cells, such as A1:A10.
Formula	A calculation in a cell, starting with an equals sign.
Function	A built-in formula, such as SUM or AVERAGE.
Relative reference	A cell reference that changes when a formula is copied.
Absolute reference	A cell reference that stays the same when copied, such as B1.
Conditional formatting	Changing a cell's appearance automatically, based on its value.
Data validation	Rules that stop incorrect data being entered.
Model	A spreadsheet that represents a real situation.

Quick questions

Cover the answers and test yourself: remembering is what makes it stick.

1. What is a cell reference?
2. What must every spreadsheet formula start with?
3. Which function adds up a range of cells?
4. What does =AVERAGE(B2:B6) do?
5. What does =MAX(A1:A10) find?
6. What does an absolute reference, such as B1, do?
7. Cell A1 holds 5 and cell B1 holds 3. What does =A1*B1 give?
8. What does =IF(C2>=50,"Pass","Fail") show if C2 is 40?

Answers

1. The column letter and row number of a cell, such as B3
2. An equals sign
3. SUM
4. Finds the mean of the values in B2 to B6
5. The largest value in A1 to A10
6. Stays the same when the formula is copied
7. 15
8. Fail

Your notes

What to do next

Practise 13 questions on this topic

Try 4 exam questions, with mark schemes

Read the lesson, one step at a time

Free revision for GCSE and KS3 at lycolearn.co.uk. Some notes are for one exam board only, and say so in brackets.

Your notes