

20.2 Manipulate data

Syllabus 2026 - 2028

WHAT YOU NEED TO KNOW

- Sort data in ascending or descending order using one criterion or several criteria
- Search and select subsets of data using one or several criteria
- Use the operators AND, OR, NOT, >, <, =, >=, <=, <> and wildcards in searches

Sorting data

Sorting puts the rows of a table in order. **Ascending** order is A to Z or smallest to largest; **descending** order is Z to A or largest to smallest. The whole data range must be selected so that each row stays together; if only one column is sorted, the data in the rows no longer matches.

- Single criterion:** sort on one column, for example Surname A to Z
- Multiple criteria:** sort on a first column and then, where values are equal, on a second one. This is called sorting on primary, secondary and tertiary keys
- Tick the box to say that the data has headings so that they are not sorted with the data

Sort level	Column	Order
First (primary)	Class	A to Z
Then (secondary)	Mark	Largest to smallest
Then (tertiary)	Surname	A to Z

Result: learners are grouped by class, and within each class the highest mark is first. Learners with the same mark are put in alphabetical order.

Searching and selecting data

Searching (filtering or querying) shows only the rows that meet the criteria and hides the rest. The data is not deleted. Criteria can be on one field or on several fields.

Operator	Meaning	Example	Finds
=	Equal to	Town = "Manzini"	Records for Manzini
>	Greater than	Mark > 70	Marks above 70
<	Less than	Age < 16	Ages under 16
>=	Greater than or equal to	Mark >= 50	50 and above
<=	Less than or equal to	Mark <= 49	49 and below
<>	Not equal to	Town <> "Mbabane"	Every town except Mbabane
AND	Both conditions must be true	Class = "4A" AND Mark > 60	Class 4A with marks over 60
OR	At least one condition is true	Class = "4A" OR Class = "4B"	All learners in 4A or 4B
NOT	Excludes records that match	NOT Class = "4C"	Everyone except class 4C

Multiple criteria: AND makes the search narrower (fewer results). OR makes it wider (more results). Brackets can be used to group conditions, for example (Class="4A" OR Class="4B") AND Mark>=50.

Wildcards

A wildcard stands in for unknown characters, so that you can search for a pattern.

Wildcard	Stands for	Example	Finds
*	Any number of characters (including none)	Sm*	Smith, Smythe, Sm
*		*son	Johnson, Thompson
?	Exactly one character	H?t	Hat, Hit, Hot (not Heat)

EXAM TIP

Read criteria carefully: 'more than 50' is > 50 , but 'at least 50' is ≥ 50 . In a search, state the field name, the operator and the value, for example 'Class = 4A AND Mark > 60 '.

Key terms

Term	Meaning
Ascending	Smallest to largest or A to Z.
Descending	Largest to smallest or Z to A.
Criteria	The conditions a record must meet to be selected.
Wildcard	A symbol such as * or ? that stands for unknown characters.
Filter	Showing only the rows that meet the criteria.