

3

B

1

C

3

B

5

One mark for each bullet point

- MOD – returns the remainder of a division calculation.
- Example: $X \leftarrow \text{MOD}(10, 3)$
- DIV – Integer division/returns the quotient of a division.
- Example: $Y \leftarrow \text{DIV}(10, 3)$

2

C

3

One mark for a correct statement about each data type ...
 ... **one** mark for a correct example of data for each data type.

Example answer

Integer A whole number [1]
 Example 27 [1]

Real A number that contains a fractional part [1] ...
 Example 18.75 [1]

5

One mark for each description, **one** mark for each example

- arithmetic – used in calculations (1) $A \leftarrow B + C$ (1)
- Boolean – used for operations with true or false values (1) $\text{IF } B \text{ AND } C$ (1)
- logical – used in comparisons/conditional statements/selection statements (1) $\text{IF } B > C$ (1)

3

One mark for a correct statement about each data type and **one** mark for a correct example of data for each data type.

For example:

String A group of characters consisting of letters, numbers and special characters [1], Cambridge2024 [1]

Char A single character [1] X [1]

7(a)	One mark per mark point MP1 Assignment of given string to <code>FullText</code> MP2 Correct use of <code>SUBSTRING</code> and assignment of reduced string to own variable MP3 Correct use of <code>UCASE</code> MP4 Output of both strings Example: <pre>FullText ← "IGCSE Computer Science at Cambridge" PartText ← SUBSTRING(FullText, 7, 16) OUTPUT PartText, UCASE(FullText)</pre>
7(b)	One mark per mark point MP1 Opening the correct text file for writing MP2 Writing the variable from part (a) to the file MP3 Closing the text file after writing Example: <pre>OPENFILE "Subjects.txt" FOR WRITE WRITEFILE "Subjects.txt", PartText CLOSEFILE "Subjects.txt"</pre>

6	One mark for identifying a type of iteration, one mark for accompanying description max four - count controlled (1) number of iterations is pre-determined (1) - pre-condition (1) checks condition at start of loop // loop may not iterate (1) - post-condition (1) checks condition at end of loop // loop always iterates at least once (1)
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5	One mark per mark point, max three MP1 variables and constants should have meaningful identifiers MP2 ...so that programmers/future programmers are able to understand their purpose MP3 they are both used for data storage MP4 constants store values that never change during the execution of a program // by example MP5 variables contain values that have been calculated within the program / can change during the execution of the program // by example
8	One mark per mark point, max four Procedures, max three MP1 to enable the programmer to write a collection of programming statements under a single identifier MP2 to allow modular programs to be created // to allow procedures to be re-used within the program or in other programs MP3 to make program creation faster because procedures can be re-used // to enable different programmers to work on different procedures in the same project MP4 to make programs shorter (than using the repeated code) / using less duplication of code // to make programs easier to maintain due to being shorter. Parameters, max three MP5 to pass values from the main program to a procedure / function MP6 ...so that they can be used in the procedure / function MP7 allow the procedure / function to be re-used with different data.