01	1	**3 marks for AO2 (apply)** 1 mark if column `z` increments by 1 and starts at 0; 1 mark if column `z` has the final value 3; 1 mark if `correct` column is correct; **z** / **correct** 0 / false 1 / true 2 / 3 / / /	3

01	2	**Mark is for AO2 (apply)** false; **I.** Case	1

01	3	**Mark is for AO2 (apply)** Second row only;	1

New Line	**Tick one box**
`IF user = us[z] OR pass = ps[z] THEN`	
`IF user = us[z] AND pass = ps[z] THEN`	Tick
`IF NOT (user = us[z] AND pass = ps[z]) THEN`	

Question	Part	Marking guidance	Total marks
01	4	**Mark is for AO2 (apply)** Maximum 2 marks from: The program will return true as soon as a match (between username and password) is found; So there is no need to (always) iterate over the complete array(s)/list of usernames; (If a match is found and is not last in the list) the algorithm will complete in fewer steps/less time; **A**. the programmer has used fewer variables	2

Qu	Part	Marking guidance	Total marks
02	1	**2 marks for AO2 (apply)** The first value of result 16; The last value of result 12; Max 1 mark if more than two values are given for result. The correct table is as follows: `result` 16 12	2
02	2	**2 marks for AO2 (apply)** The `x` column fully correct; The `result` column fully correct; If more values are given in any column then max 1 mark. The correct table is as follows: `x` / `result` 0 1 / 4 2 / 8 3 / 12 **I.** Horizontal alignment of values as long as the vertical order of values is correct.	2
02	3	**Mark is for AO2 (apply)** (The purpose of the algorithms is) to multiply the value in `number` by 3; **A.** The value 4 instead of `number`. **NE.** Multiply two numbers.	1
02	4	**Mark is for AO2 (apply)** The algorithm in **Figure 4** uses fewer steps/instructions; **A.** The algorithm in **Figure 4** uses fewer variables; **A.** The algorithm in **Figure 4** has fewer instructions so will take up less memory; **A.** The algorithm in **Figure 4** will execute in less time; **A.** Opposite statements for **Figure 5**. **NE.** Reference to number of lines.	1

Question	Part	Marking guidance	Total marks
03	1	**Mark is for AO2 (apply)** **C** Program B is more efficient than Program A; **R.** If more than one lozenge shaded	1

Question	Part	Marking guidance	Total marks
03	2	**2 marks for AO2 (apply)** It will take less time for the computer to execute program B; because fewer lines of code will be executed; // The number of calculations performed is constant in Program B; but increases as the number input gets bigger in Program A; **A.** Program B has fewer variables; so, would use less memory (when executing);	2