Do not write outside the box

0 2 The three examples of code shown in **Figure 2** are all equivalent to one another.

Figure 2

Example 1	Example 2	Example 3

a ← 4
b ← 3
IF a = b THEN
  c ← a + b
ENDIF
	MOV R0, #4
	MOV R1, #3
	CMP R0, R1
	BNE end
	ADD R2, R0, R1
	end:
	HLT
		1001 0000 0100 0000
		1001 0001 0011 0000
		0100 0000 0001 0000
		1010 0101 0000 0000
		1100 0010 0000 0001
		1111 0000 0000 0000

0 2 . 1 Shade **one** lozenge to show the statement that is true about **Figure 2**.

[1 mark]

A None of the examples of code is in a low-level language. ⬭

B Only one of the examples of code is in a low-level language. ⬭

C Only two of the examples of code are in low-level languages. ⬭

D All three of the examples of code are in low-level languages. ⬭

0 2 . 2 Explain why a developer, who is good at both low-level and high-level programming, would normally use high-level languages when writing programs.

[4 marks]

Do not write outside the box

0 2 . 3 Statements **A** and **B** refer to two different types of program translator.

Statement A: This type of translator can convert a high-level language program into machine code. The source code is analysed fully during the translation process. The result of this translation can be saved, meaning the translation process does not need to be repeated.

Statement B: This type of translator was used to convert the code in **Example 2** to the code in **Example 3** in **Figure 2**.

State the type of program translators referred to in statements **A** and **B**.

[2 marks]

Statement **A**: _____

_____

Statement **B**: _____

_____

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Turn over for the next question