0 1 The subroutine `CODE_TO_CHAR` can be used to convert a character code into the corresponding Unicode character. For example:

`CODE_TO_CHAR(97)` will return the character `'a'`
`CODE_TO_CHAR(65)` will return the character `'A'`

The subroutine `CHAR_TO_CODE` can be used to convert a Unicode character into the corresponding character code. For example:

`CHAR_TO_CODE('a')` will return the integer `97`
`CHAR_TO_CODE('A')` will return the integer `65`

0 1 . 1 Shade **one** lozenge to show what value would be returned from the subroutine call `CODE_TO_CHAR(100)`

[1 mark]

A `'c'` ⬭

B `'d'` ⬭

C `'e'` ⬭

D `'f'` ⬭

0 1 . 2 State the value that will be returned from the subroutine call:

```
CODE_TO_CHAR(CHAR_TO_CODE('E') + 2)
```

[1 mark]

Value returned _____

0 1 . 3 Write a subroutine `TO_LOWER`, using either pseudo-code **or** a flowchart, that takes an upper case character as a parameter and returns the corresponding lower case character.

For example, if the subroutine `TO_LOWER` is passed the character `'A'` as a parameter, the subroutine should return the character `'a'`.

You should make use of the subroutines `CODE_TO_CHAR` and `CHAR_TO_CODE` in your answer.

You can assume that the parameter passed to the subroutine will be in upper case.

[5 marks]

0 2 State **one** advantage of using Unicode instead of using ASCII.

[1 mark]

0 3 The ASCII value for the character x is the decimal number 120

Complete **Table 1** with the missing ASCII and Unicode values.

[2 marks]

Table 1

Character	ASCII value	Unicode value
w		
x	120	
y		
z		

Turn over for the next question

ASCII (American Standard Code for Information Interchange) is a coding system that can be used to represent characters. In ASCII the character A is represented by the numeric code 65.

0 4 . 5 Shade **one** lozenge to indicate which character is represented by the numeric code 70.

[1 mark]

A E ⬭

B F ⬭

C f ⬭

D 6 ⬭

E e ⬭

0 4 . 6 Unicode is an alternative to the ASCII coding system.

State **two** advantages of using Unicode to represent characters instead of using ASCII.

[2 marks]