Section B

You are advised to spend no more than **20 minutes** on this section.

Enter your answers to **Section B** in your Electronic Answer Document.
You **must save** this document at regular intervals.

The question in this section asks you to write program code **starting from a new program/project/file**.

You are advised to save your program at regular intervals.

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0 1

Double factorial on a non -negative integer n, is the product of all integers from 1 to n that have the same parity (odd or even) as n. It is denoted by **!!.**

For example, double factorial of 9 (ie 9!!) is 9*7*5*3*1 which is 945.

For example, double factorial of 8 (ie 8!!) is 8*6*4*2 which is 384.

Note that 0!! = 1

Figure 1 and **Figure 2** show additional examples of how the double factorial of a number is calculated.

Figure 1

```
Input: 6
Output: 6!! = 6*4*2 = 48
```

Figure 2

```
Input: 7
Output: 7!! = 7*5*3*1 = 105
```

What you need to do

Task 1
Write a program that will work out the double factorial of a given number. The program should display a suitable prompt asking the user to input the number to use and then output the working out along with the final answer.

Task 2
Test the program works by entering the number `20`.

Task 3
Test the program works by entering the number `21`.

Evidence that you need to provide
Include the following in your Electronic Answer Document.

0 1 . 1 Your PROGRAM SOURCE CODE.

[12 marks]

0 1 . 2 SCREEN CAPTURE(S) for the test showing the output of the program when `20` is entered.

[1 mark]

0 1 . 3 SCREEN CAPTURE(S) for the test showing the output of the program when `21` is entered.

[1 mark]