How much does a trip cost?

Background

- Mark works as a programmer for a parcel delivery company.
- He has to create a program to calculate the cost per mile for self-employed drivers who use their own vehicles to make deliveries.
- The drivers can claim this money back from the company.
- Drivers need to input into the programme the number of miles they have completed for a trip.
- The output is a written message containing the cost that the driver can claim.

Your task

Create a program using Python that allows the user to:

- input the number of miles travelled as a decimal
- receive an output for the total cost for a journey as a sentence

The program should:

- calculate the cost of the journey at £0.80 per mile if the number of miles is < 5 miles
- if the journey is over 5 miles calculate the cost as £0.80 for the first 5 miles and £0.40 for the remaining miles
- round the output value to 2 decimal places
- consider the user experience to create a suitable visual output

Areas to consider

These questions will help you write your program:

- What input is being asked for?
- How will you store the input?
- What data type should the input be?
- What is being output?
- What conditions need to be checked for calculations to take place?
- What format will the output be in?
- How will the program output start for the user, what information will they see?
- Can you use a function to make the program more efficient?

Next steps:

- Plan your program
- Create the algorithm
- Write the code for your program

Testing

Use the information in the table to form a test plan for your program:

- calculate the expected outcome
- complete the test plan to check your program
- debug any errors

Test input	Expected outcome	Actual outcome from program	Any action
56	5 * 0.8 = 4 51 * 0.4 = 20.4 Total = 24.40 The cost of the trip for 56 miles is £24.40		
4			
26			
81			
1.5			
12.5			