

Name: _____

ID Number: _____

Submit your responses by the end of class on Thursday, March 12. The study skills questions must be submitted to the appropriate drop box in D2L. The Parson Problem must be submitted on a bubble sheet either in class or by sliding it under Ben's office door (ICT 704).

If you provide credible answers for the study skills questions and score at least 10 out of 12 on the Parsons Problem your midterm exam grade will be increased in the following manner:

- If your midterm exam grade was better than F, then your midterm exam grade will be increased by 1/3 of a letter grade (a C- becomes a C, a B+ becomes an A-, etc.).
- If your midterm exam grade was F, then your midterm exam mark will be increased by 1.5 marks and your letter grade will be recalculated based on the new mark.

Q1: The midterm exam question paper is available on the course website. Your bubble sheets for the traditional multiple-choice questions and the Parsons Problem can both be accessed from the course website using the appropriate link, your ID number, and your access code which is posted in D2L.

Look back over your exam carefully. In the table below, list how many marks you lost for each of the categories. Lost marks can count in multiple categories so the total in the table does not need to match the number of marks you lost on your exam. However, every mark you lost on the exam should appear in at least one category.

Category	Marks
Introductory material such as the history of computing, disciplines within computer science and solving problems with a computer	
Programming concepts related to input, output, mathematical expressions or types	
Data representation problems such as base conversions and representations of other types of values	
Conceptual questions involving if statements	
Tracing if statements	
Conceptual questions involving loops	
Tracing loops	
Difficulty understanding the problem or identifying the steps needed to solve the Parsons Problem	
Difficulty selecting or ordering the Parsons Problem statements even though you knew what steps were needed to solve the problem	
Careless mistakes where you knew the answer but wrote down something else (such as shading the wrong answer) or inadvertently leaving an answer blank	
Other (briefly describe on this line):	

Q2: Consider your preparation for this exam. Estimate the number of minutes that you spent on each of the following activities and then calculate the percentage of time (to the closest integer). Your percentages must add up to 100 (or very close to it if it doesn't quite work out exactly due to rounding).

Activity	Minutes	Percent
Writing or typing summaries of course concepts		
Asking questions during office hours or at the continuous tutorial desk		
Discussing the course concepts with a friend or classmate		
Reading the lecture notes and example programs		
Editing and running the example programs created during class		
Doing the (strongly) recommended exercises from the textbook		

Reading the recommended sections of the textbook		
Solving problems from sources other than those provided by the instructor		
Reading over the old midterm exams		
Doing the old midterm exams		
Reading over the practice Parsons Problems		
Doing the practice Parsons Problems		
Other		

If you entered a non-zero value for “Other” please briefly describe the other activities you used to prepare for the exam.

Q3: Of the activities listed in the previous question, which do you think was the most effective as preparation for the exam?

Q4: What did you NOT do (or didn't spend enough time doing) that you now realize would have been effective? (You may leave this question blank if you earned an A- or better on the midterm exam and you don't feel like there are things you should have done.)

Q5: If you scored less than an A- on the midterm exam, list at least three things that you plan to do differently as you prepare for the next midterm exam and the final exam. (If you earned an A- or better on the midterm exam and plan to make changes please list those changes here. If you earned an A- or better and don't plan to make changes you can leave this question blank.)

Q6: Answer the following Parsons Problem on a bubble sheet. Bubble sheets are available in class. **This problem is to be solved on your own without the aid of other people or artificial intelligence.** You are welcome to use your notes, the course textbook, and/or Python (including running the program that you create) to assist you as you solve this problem.

In a particular jurisdiction speeding is penalized with a monetary fine and a number of demerit points, as outlined in the following table:

km/h over	fine	demerit points
1 - 19	\$3.00 per km/h over the limit	0
20 - 29	\$4.50 per km/h over the limit	3
30 - 49	\$7.00 per km/h over the limit	4

If one is caught exceeding the speed limit by 50km/h or more, then one must appear in front a judge who will determine the fine and number of demerit points.

Write a program that reads an excess speed from the user and reports:

- That the driver was not speeding if the excess speed is 0
- The amount of the fine and number of demerit points assigned if the entered value indicates that the driver was speeding, and the amount by which they were speeding is less than 50km/h
- That the driver must appear before a judge if the excess speed is 50km/h or more

Your program should continue reading speed values and reporting the result until the user enters a value less than 0. Your program should exit without displaying any output if the first value entered is negative.

Sample input and output is shown below. The values entered by the user are shown in bold.

Enter the amount of excess speed: **0**
You weren't speeding -- no penalty.
Enter the amount of excess speed: **10**
At that speed you'll be fined \$30.00 and receive 0 demerit points.
Enter the amount of excess speed: **25**
At that speed you'll be fined \$112.50 and receive 3 demerit points.
Enter the amount of excess speed: **49**
At that speed you'll be fined \$343.00 and receive 4 demerit points.
Enter the amount of excess speed: **50**
At that speed you'll need to appear in front of a judge.
Enter the amount of excess speed: **-1**

Additional sample input and output is shown below:

Enter the amount of excess speed: **50**
At that speed you'll need to appear in front of a judge.
Enter the amount of excess speed: **0**
You weren't speeding -- no penalty.
Enter the amount of excess speed: **-10**

A final set of input and output is shown below:

Enter the amount of excess speed: **18**
At that speed you'll be fined \$54.00 and receive 0 demerit points.
Enter the amount of excess speed: **-5**

Use the following lines to construct your solution. Record your answer onto the provided bubble sheet. Ensure that you follow the dashed vertical lines for any indented statements and that you shade the digits associated with each statement that you use. Statements can be used more than once. Some statements may not be needed.

```
1: demerits = 0
3: demerits = 3
5: demerits = 4
7: elif excess_speed < 20:
9: elif excess_speed < 30:
12: elif excess_speed < 50:
14: else:
16: excess_speed = int(input("Enter the amount of excess speed: "))
18: fine = excess_speed * 3.00
23: fine = excess_speed * 4.50
25: fine = excess_speed * 7.00
27: if excess_speed == 0:
29: if excess_speed < 0:
34: if excess_speed < 20:
36: print(f"At that speed you'll be fined ${fine:.2f} and receive {demerits} demerit points.")
38: print("At that speed you'll need to appear in front of a judge.")
45: print("You weren't speeding -- no penalty.")
47: while excess_speed >= 0:
49: while excess_speed == 0:
56: while excess_speed < 0:
```