Lab-3 Ex3 - Splitting the Bill

Luncheon of the Boating Party (1881). Wikipedia

When you go to restaurants with friends or relatives, it is very common to split the bills. Below is a simple bill splitting program in C.

```c
#include <stdio.h>

int main() {
    int people;
    double cost, tips, per_person;

    printf("Input number of people: ");
    scanf("%d", &people);

    printf("Input cost of meal: ");
    scanf("%lf", &cost);

    printf("Input tips: ");
    scanf("%lf", &tips);

    per_person = (cost + tips) / people;
    printf("Everyone pays: %.2f\n", per_person);

    return 0;
}
```

But in many occasion, there will be adults and *children*. Let's assume that when you split the bill, children only need to pay half price of adults. For instance, if a `$100` meal is shared by `2` adults and `1` child:

- You can consider a child as `0.5` of an adult; so in total you can consider the total number of people is `2.5`
- The adults will thus pay `$100 / 2.5 = $40` while the child will pay `$40 * 0.5 = $20`.

By building on the above sample code, the improved C program should ask for:

- How many ***adults*** enjoyed the meal (always > 0)
- How many ***children*** enjoyed the meal (for simplicity, always > 0)
- The total ***cost*** of the meal (non-negative)
- The ***tips*** (non-negative)

Assume everyone will share both the cost of the meal and the tips. The program should output ***how much each adult and each child should pay***, separately, in 2 decimal places.

Assuming all input are valid, here is how the program should run:

Sample Run #1 (user input is bolded and in italic)

```
Input number of adults: 2

Input number of children: 1

Input cost of meal: 95.5

Input tips: 4.5

Each adult pays: 40.00

Each child pays: 20.00
```

Sample Run #2 (user input is bolded and in italic)

```
Input number of adults: 5

Input number of children: 2

Input cost of meal: 200

Input tips: 20

Each adult pays: 36.67

Each child pays: 18.33
```

> Note that the "expected output" in Gradescope will not display *user input*.