CISS240: Introduction to Programming
Assignment 1

Name: _____

Q1. According to Elbert Ainstein, your IQ is given by the following formula:

```
IQ = 3 * w / h + (3 + f) / 42
```

where w is your waist (in inches), h is your height (in inches), and f is the number of fingers on your hands. The divisions are all integer divisions (i.e. quotients). Write a program that prompts the user for w, h, and f and print his/her IQ. (No ... the software won't sell.)

Test 1.

```
Enter w: 1
Enter h: 2
Enter f: 3
IQ: 1
```

Test 2.

```
Enter w: 6
Enter h: 5
Enter f: 4
IQ: 3
```

Test 3.

```
Enter w: 10
Enter h: 10
Enter f: 10
IQ: 3
```

Q2. Write a program that prompts the user for his/her age and print his/her age next year. The following are test cases that your program must pass:

Test 1.

```
How old are you? 20
You are 20 years old now. Next year you will be 21.
```

Test 2.

```
How old are you? 155
You are 155 years old now. Next year you will be 156.
```

Test 3.

```
How old are you? -5
You are -5 years old now. Next year you will be -4.
```

Q3. According to Al Chemiz the amount of gold you can produce from x amount of air (cubic feet), y amount of water (gallons), z number of worms, i amount of wood (pounds) boiling at t temperature (celsius) is given by the following formula:

$$x + \frac{y}{z+i}t^3$$

Write a program that prompts the user for x, y, z, i, t and prints the value for the above expression. Assume that the division is an integer division. Your program must pass the following tests:

(Note that when capturing several integer inputs from the keyboard using `std::cin`, you can enter all inputs on one line separated by any whitespace such as a space or a tab.)

Test 1.

```
1 2 3 4 5
1
```

Test 2.

```
5 4 3 2 1
5
```

Test 3.

```
42 41 3 2 1
50
```

Q4. Write a program that waits for a 5-digit number to be entered by the user and then displays the digits of the number entered by the user, with a space separating adjacent digits. The following are test cases that your program must pass.

Test 1.

```
31452
3 1 4 5 2
```

Test 2.

```
97531
9 7 5 3 1
```

Test 3.

```
30000
3 0 0 0 0
```