

1.

Write a program that allows a user to enter a temperature (**degrees Fahrenheit, °F**), and transforms the temperature to **degrees Celsius (°C)** and **Kelvin (K)**.

Formulas:

$$[^{\circ}\text{C}] = ([^{\circ}\text{F}] - 32) \times \frac{5}{9}$$

$$[\text{K}] = [^{\circ}\text{C}] + 273.15$$

Precision in output: display 3 digits after the decimal point.

```
Please enter °F: 55.66
°C= 13.144
K= 286.294
```

2.

Write a program to computing the value of

$$1 + \frac{1}{1} + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{n} \quad \text{where } n \text{ is an integer entered by user.}$$

```
Input a Number: 123
Answer: 6.393459
```

```
請按任意鍵繼續 . . .
```

```
Input a Number: 456
```

```
Answer: 7.700805
```

```
請按任意鍵繼續 . . .
```

3.

(Bonus) Write a program to solve two equations with two unknowns.

$$ax + by = c$$

$$dx + ey = f$$

Note: the answer x, y should be rounded to 2 place after decimal point.

```
Enter the variable a,b,c,d,e,f: 1 2 3 4 5 6
```

```
solve the equation:
```

$$1x + 2y = 3$$

$$4x + 5y = 6$$

```
The answer x=-1.00, y=2.00
```

```
請按任意鍵繼續 . . .
```

4. 給定一個數，請計算該數的 3 進位。