PartI

Perform the following calculations showing the **order of operations clearly**. Then convert these problems into equations using Python programming language. Check your answers

1. If x = 4, y = 2, n = 2 evaluate

    $$\frac{x^n}{y^n}$$

2. If x = y = n = 2

    $$x^n + x^n$$

3. $9 - 1 + 9 + 3^4$

4. $40 \times 8 - 10^2$

5. $8^3 - 9 \times 2 \div 3$

6. $6 \times 2 + 6^4$

7. $9 \times 3 + (7 + 3 \times (5 - 2)) \div 4 \times 3$

8. If a = -6 and b = 7, then 4a(3b + 5) + 2b=?

9. If x=4 and y=10, what is the value of the expression $3x^2y + y \div 2 - 6x$?

10. If w = 7, calculate the value of the following expression: $8w^2 - 12w + (4w - 5) + 6$

11. $4(6 - 3)^2 - (-2)$

12. $-11 - (16 - 32)$

13. $-3(5)^2 + 2(4 - 18) + 33$?

14. $2(7 + 8)^2 - 12(6(2))$

PartII
Answer the following questions:
1. Order the expressions from least to greatest 5^2, $6^2 - 6$, $4^2 + 2^3$

2. These operations are meant to be written in Python, what is the output

    a. print (9//2)
    b. print (9 ** 2)
    c. print (9%2)
    d. print(9/2)
    e. print (9 * 2)
    f. print (9 + 2)
    g. print (9-2)

PartIII

1. Write this equation as a python statement $x(t) = x_0 + v_0 t + \frac{at^2}{2}$

2. White the solution of this problem as a Python statement
   The Harris-Benedict equation estimates the number of calories your body needs to maintain your weight if you do not exercise. This is called your Base Metabolic Rate or BMR.

   The calories needed for a woman to maintain her weight is:
   BMR =655 + (4.3 x weight in pounds) + (4.7 x height in inches) - (4.7 x age in years)

   The calories needed for a man to maintain his weight is:
   BMR = 66 + (6.3 x weight in pounds) + (12.9 x height in inches) - (6.8 x age in years)
   A typical chocolate bar will contain around 230 calories.

Write two Python statements , call one male and the other one female that calculates the BMR for a male and a female.

   Then Draw the flowchart to solve the previous problem. You have to ask the user to enter the information using the input function