


April 29, 2024

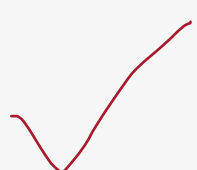
```
[ ]: #Qn.1 Even or Odd
#number = int(input("number:"))
def even_or_odd (number):
    if number % 2 == 0:
        print ("even")
    else:
        print ("odd")
even_or_odd (9)
```



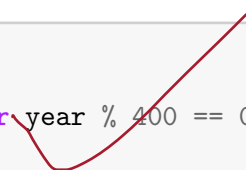
odd

```
[ ]: #Qn.2 Maximum of two numbers
def max_of_two (number1,number2):
    print (max(number1 , number2))
max_of_two (4,8)

# Another example
def max_of_two (number1,number2):
    if number1 > number2:
        print (number1)
    else:
        print (number2)
max_of_two (6,9)
```

8
9

```
[ ]: #Qn.3 Leap Year Checker
def is_leap_year (year):
    print(year % 4 ==0 and (year % 100 !=0 or year % 400 == 0))
is_leap_year(1900)
```



False

```
[ ]: #Qn.4 Factorial calculator
def factorial_of_number(n):
    if n==0 or n==1:
        print(1)
```

```

else:
    factorial = 1
    for number in range (1, n+1):
        factorial *= number
    print(factorial)
factorial_of_number(5)

```

120

```

[ ]: # Qn.5 Greatest common divisor
def gcd (number1, number2):
    while number2 != 0 :
        new_number2 = number2
        number2 = number1%number2
        number1 = new_number2
        if number2==0:
            print(number1)
gcd(18,12)

# another example
def gcd (int1, int2):
    divisor = min(int1 , int2)
    while divisor > 0:
        if int1 % divisor == 0 and int2 % divisor == 0 :
            print(divisor)
            break
        divisor -= 1
gcd(18,12)

```

6

6

```

[ ]: # Qn.6 Absolute value
def absolute_value(number):
    if number < 0:
        print(- number)
    else:
        print(number)
absolute_value(-4)

```

4


```

[ ]: #Qn.7 Temperature convertor
def convert_temperature (Celsius):
    Fahrenheit = (Celsius * (9/5)) + 32
    print(Fahrenheit)
convert_temperature(25)

```

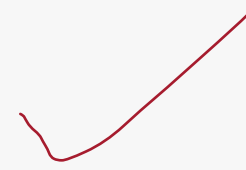
77.0

```
[ ]: #Qn.8 Grade caculator
def calculate_grade (score):
    if 90 <= score <= 100:
        print('A')
    elif 80 <= score <= 89:
        print('B')
    elif 70 <= score <= 79:
        print('C')
    elif 60 <= score <= 69:
        print('D')
    else:
        print('F')
calculate_grade (80)
```




B

```
[ ]: #Qn.9 Sum of squares with a loop
def sum_of_squares(n):
    sum = 0
    for number in range (1, n+1):
        sum += number ** 2
    print(sum)
sum_of_squares(4)
```



30

```
[ ]: #Qn.10 Quadratic equation solver
def solve_quadratic(a,b,c):
    discriminant = (b**2-(4*a*c))
    if discriminant == 0:
        root = -b/(2*a)
        print((root))
    elif discriminant > 0:
        root1 = (-b + (discriminant)**0.5)/(2*a)
        root2 = (-b - (discriminant)**0.5)/(2*a)
        print((root1 , root2))
    else:
        discriminant < 0
        print((None))
solve_quadratic(3,5,4)
```



None