In [3]:
```
def f(n):
    if n > 2:
        return f(n-1) + f(n-2)
    if n <= 2:
        return n + 4
f(6)
```

Out[3]:
```
45
```

In [4]:
```
def f(n):
    if n >= 2:
        return f(n-1) * n
    if n == 1:
        return 2
f(5)
```

Out[4]:
```
240
```

In [5]:
```
def f(n):
    if n == 0:
        return 0
    if (n > 0) and (n % 3 == 0):
        return f(n/3)
    if n % 3 > 0:
        return (n % 3) + f(n - (n % 3))
for i in range(1000):
    if f(i) == 9:
        print(i, f(i))
        break
```

```
161 9.0
```

In [6]:
```
def f(n):
    if n == 1:
        return 1
    if n > 1:
        return f(n-1)*(n+1)
f(4)
```

Out[6]:
```
60
```

In [7]:
```
def f(n):
    if n == 1:
        return 1
    if n > 1:
        return f(n-1)*(n+1)
f(5)
```

Out[7]:
```
360
```

In [8]:
```
def f(n):
    if n == 0:
        return 0
    if (n > 0) and (n % 3 == 0):
        return n + f(n-3)
    if n % 3 > 0:
        return n + f(n - (n % 3))
f(22)
```

Out[8]:
```
106
```

In [9]:
```
def f(n):
    if n == 1:
        return 1
    if n == 2:
        return 1
    if n > 2:
        return f(n-1)*n-2*f(n-2)
f(6)
```

Out[9]:
```
44
```

In [10]:
```
def f(n):
    if n == 1:
        return 1
    if n > 1:
        return f(n-1)*f(n-1)-f(n-1)*n+2*n
f(4)
```

Out[10]:
```
20
```

In [11]:
```
def f(n):
    if n == 1:
        return 1
    if n == 2:
        return 3
    if n > 2:
        return f(n-1)*f(n-2)+(n-2)
f(5)
```

Out[11]:
```
59
```

In [13]:
```
def f(n):
    if n == 1:
        return 1
    if n > 1:
        return 2*f(n-1)+1
f(6)
```

Out[13]:
```
63
```