

Prva pred drugimi

```
def first_before_second(ch, s):
    f_max = s.rfind(ch[0])
    c_min = s.find(ch[1])
    return f_max < c_min

if __name__ == '__main__':
    import sys
    for l in sys.stdin:
        ch = l[:2]
        s = l[2:]
        print(first_before_second(ch, s))
```

Kakšno je zaporedje

```
def diff(nums):
    return list(map(lambda x, y: x - y, nums[1:], nums[:-1]))

def seq_lin_qua_cub(nums):
    lst = ["linear", "quadratic", "cubic"]
    for i in range(3):
        nums = diff(nums)
        if len(set(nums)) == 1:
            return lst[i]
    return False

if __name__ == '__main__':
    import sys
    for nums in sys.stdin:
        nums = [int(x) for x in nums.split()]
        print(seq_lin_qua_cub(nums))
```

Kaprekarjevo zaporedje

```
def kaprekar(x):
    n = len(x)
    mini = ''.join(sorted(x))          # uredi številke po velikosti v premem
    maxi = ''.join(sorted(x, reverse=True)) # in obratnem vrstnem redu
    x = str(int(maxi) - int(mini))      # x je razlika
    x = x.zfill(n)                     # doda vodilne ničle, da dolžina ostane n
    return x

def kaprekar_(n):
    visited = set(n)
    while True:
        n = kaprekar(n)
        if n in visited:
            break
        visited.add(n)
    return n

def kaprekar_cycle(n):
    nn = [kaprekar_(n)]
    while True:
        m = kaprekar(nn[-1])
        if m == nn[0]:
            break
        nn.append(m)
    return ' '.join(nn)

if __name__ == '__main__':
    import sys
    for n in sys.stdin:
        n = int(n)
        print(kaprekar_cycle(str(n)))
```

Ena-Ena-Ena

```
def only_ones(n):
    if n<=0:
        return 0
    else:
        return (n + 10 * only_ones(n-1))

if __name__ == '__main__':
    import sys
    for line in sys.stdin:
        print(only_ones(int(line)))
```

Petkotniško število

```
def penta_num(n):
    if n == 0:
        return 0
    elif n == 1:
        return 1
    else:
        return 5 * (n - 1) + penta_num(n - 1)

if __name__ == '__main__':
    import sys
    nums = sys.stdin.read().split("\n")
    for line in nums:
        print(penta_num(int(line)))
```