Entrée [1]:

```
# --- anneaux (non dirigés)

def A(n):
    """ on fabrique un anneau (non dirigé) de taille n >= 3
    """
    A = [ [x,x+2]  for x in range(n-2) ]
    A.insert(0,[1,n-1])
    A.append([0,n-2])
    return A
```

Entrée [2]:

```
print(A(5))
```

```
[[1, 4], [0, 2], [1, 3], [2, 4], [0, 3]]
```

Entrée [3]:

```
print(A(3))
```

```
[[1, 2], [0, 2], [0, 1]]
```

Entrée [4]:

```
# --- roues (non dirigées)

def R(n):
    """ on fabrique une roue avec n sommets
    """
    R = [ [x,x+2]  for x in range(1,n-2) ]
    R.insert(0,[2,n-1])
    R.append([1,n-2])
    R.insert(0,[x for x in range(1,n)])
    return R
```

Entrée [5]:

```
print(R(3),"\n") ; print(R(4),"\n") ; print(R(5))
```

```
[[1, 2], [2, 2], [1, 1]]

[[1, 2, 3], [2, 3], [1, 3], [1, 2]]

[[1, 2, 3, 4], [2, 4], [1, 3], [2, 4], [1, 3]]
```

Entrée [6]:

```
# --- graphes complets

def K(n):
    """ on fabrique un graphe complet avec n >= 2 sommets
    """
    K = [ [x  for x in range(n) if x != y]  for y in range(n) ]
    return K
```

Entrée [7]:

```
print(K(3),"\n") ; print(K(5))
```

```
[[1, 2], [0, 2], [0, 1]]

[[1, 2, 3, 4], [0, 2, 3, 4], [0, 1, 3, 4], [0, 1, 2, 4], [0,
1, 2, 3]]
```