```
(%i30) load("E:/instalki studia/permutacje.fasl")$
```

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```
(%i31) war(p) := not is_onecyclic(p) and is_even(p) ;
(%i32) permy: p_filter(war,5);
(%i33) length(permy);
```

(%o31) war(p):=not is_onecyclic(p) and is_even(p)

(permy) [[1,2,3,4,5],[1,2,4,5,3],[1,2,5,3,4],[1,3,2,5,4],[1,3,4,2,5],[1,3,5,4,2],[1,4,2,3,5],[1,4,3,5,2],[1,4,5,2,3],[1,5,2,4,3],[1,5,3,2,4],[1,5,4,3,2],[2,1,3,5,4],[2,1,4,3,5],[2,1,5,4,3],[2,3,1,4,5],[2,4,3,1,5],[2,5,3,4,1],[3,1,2,4,5],[3,2,1,5,4],[3,2,4,1,5],[3,2,5,4,1],[3,4,1,2,5],[3,5,1,4,2],[4,1,3,2,5],[4,2,1,3,5],[4,2,3,5,1],[4,2,5,1,3],[4,3,2,1,5],[4,5,3,1,2],[5,1,3,4,2],[5,2,1,4,3],[5,2,3,1,4],[5,2,4,3,1],[5,3,2,4,1],[5,4,3,2,1]]

(%o33) 36

```
(%i34) print_list(p_all(4));
```

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

(%o34) *done*

```
(%i36) print_list(p_all_plain_changes1(4));
[1,2,3,4]
[1,2,4,3]
[1,4,2,3]
[4,1,2,3]
[4,1,3,2]
[1,4,3,2]
[1,3,4,2]
[1,3,2,4]
[3,1,2,4]
[3,1,4,2]
[3,4,1,2]
[4,3,1,2]
[4,3,2,1]
[3,4,2,1]
[3,2,4,1]
[3,2,1,4]
[2,3,1,4]
[2,3,4,1]
[2,4,3,1]
[4,2,3,1]
[4,2,1,3]
[2,4,1,3]
[2,1,4,3]
[2,1,3,4]
(%o36) done
```

```
(%i38) print_list(p_all_plain_changes2(4));
[1,2,3,4]
[2,1,3,4]
[2,3,1,4]
[2,3,4,1]
[3,2,4,1]
[3,2,1,4]
[3,1,2,4]
[1,3,2,4]
[1,3,4,2]
[3,1,4,2]
[3,4,1,2]
[3,4,2,1]
[4,3,2,1]
[4,3,1,2]
[4,1,3,2]
[1,4,3,2]
[1,4,2,3]
[4,1,2,3]
[4,2,1,3]
[4,2,3,1]
[2,4,3,1]
[2,4,1,3]
[2,1,4,3]
[1,2,4,3]
(%o38) done
```

```
(%i43) print_list(p_all_even(4));
print_list(map(is_even, p_all_even(4)));
[1,2,3,4]
[1,3,4,2]
[1,4,2,3]
[2,1,4,3]
[2,3,1,4]
[2,4,3,1]
[3,1,2,4]
[3,2,4,1]
[3,4,1,2]
[4,1,3,2]
[4,2,1,3]
[4,3,2,1]
(%o43) done
true
true
true
true
true
true
true
true
true
true
true
true
(%o44) done
```

```
(%i45) print_list(p_all_odd(4));
print_list(map(is_odd, p_all_odd(4)));
```

```
[1,2,4,3]
[1,3,2,4]
[1,4,3,2]
[2,1,3,4]
[2,3,4,1]
[2,4,1,3]
[3,1,4,2]
[3,2,1,4]
[3,4,2,1]
[4,1,2,3]
[4,2,3,1]
[4,3,1,2]
(%o45) done
true
true
true
true
true
true
true
true
true
true
true
true
(%o46) done
```

```
(%i47) print_list(p_all_types(5));
```

```
[[1,5]]
[[1,3],[2,1]]
[[1,1],[2,2]]
[[1,2],[3,1]]
[[2,1],[3,1]]
[[1,1],[4,1]]
[[5,1]]
(%o47) done
```

```
typ:[[2,1],[3,1]]$
ptst:p_all_of_type(typ)$
ckl:map(cycles2string,map(perm2maxcycles,ptst));
il:[length(ckl),p_type_size(typ)];
```

(ckl) [(1,2)(3,4,5),(1,2)(3,5,4),(1,2,3)(4,5),(1,2,4)(3,5),(1,2,5)(3,4),
(1,3,2)(4,5),(1,3)(2,4,5),(1,3,5)(2,4),(1,3)(2,5,4),(1,3,4)(2,5),(1,4,2)(3,5),
(1,4,5)(2,3),(1,4)(2,3,5),(1,4,3)(2,5),(1,4)(2,5,3),(1,5,2)(3,4),(1,5,4)(2,3),
(1,5)(2,3,4),(1,5,3)(2,4),(1,5)(2,4,3)]

(il) [20,20]