[illegible]
[illegible]
[illegible] (Prolog)
[illegible] 2014-15
[illegible]

[illegible] 5:
[illegible]

[illegible] Prolog [illegible]

```
[a, b, c, d]
```
([illegible] a,b,c,d)

```
[a, 3, name(kostas,antoniou]
```
([illegible] a, 3 [illegible] name(kostas, antoniou)

```
[[a,b], [c,d]]
```
([illegible] [a,b] [illegible] [c,d])

[illegible] Prolog [illegible] n-[illegible] **[illegible]** ([illegible]) [illegible] **[illegible]** ([illegible]). [illegible]

```
[H | T]
```

[illegible] (H) [illegible] (T). [illegible] H [illegible] T [illegible] [] [illegible]

```
?- [H|T] = [a,b,c,d].
H = a
T = [b,c,d]

?- [H|T] = [[a,b],[c,d]].
H = [a, b]
T = [[c, d]]

?- [H|T] = [a].
H = a
T = []
```

[illegible]

```
?- [H|T] = [].
No
```

[illegible] "," ([illegible]) [illegible] "|" ([illegible])

[illegible] "," ([illegible]) [illegible] "|" ([illegible]) [illegible]

```
?- [A,B,C] = [1,2,3].
A=1
B=2
C=3

?- [A|B|C] = [1,2,3].
No

?- [A|[B|C]] = [1,2,3].
A=1
B=2
C=[3]
```

[illegible] [[illegible] 1,[illegible] 2,[illegible] 3|[illegible]]. [illegible] [[illegible] 1|[[illegible] 2|[[illegible] 3|[illegible]]]]. [illegible] 3 [illegible]

[illegible]

[illegible] Prolog [illegible], [illegible]. [illegible]

```
son(X,Y) :-
      son(X,Y).
```

[illegible] *"stack overflow"* [illegible]

> **[illegible]**
>
> [illegible] L=[H|T] [illegible] T. [illegible] (α) [illegible] (β) [illegible] H. [illegible]

[illegible]

[illegible]

[illegible] length(X,L) [illegible] L [illegible] X.

```
length([],0).                 ——  [illegible]
length([H|T],L) :-            ——  [illegible] L [illegible]
      length(T,L1),           ——  [illegible] L1 [illegible] T...
      L is L1+1.              ——  ...[illegible] L [illegible] L1+1
```

[illegible]

(α) [illegible] sum(L,X) [illegible] X [illegible] L ([illegible] L [illegible]). [illegible]

```
?- sum([3,5,11,9], X).          ?- sum([-3, 3.14, 11,9], X).
X=28                             X=20.14
```

(β) teleytaio(L,X): [illegible] X [illegible] L. [illegible]

```
?- teleytaio([4,a,d,2], X).      ?- teleytaio([red, blue, green], X).
X=2                              X=green
```

(γ) melos(X,L): [illegible] Yes [illegible] X [illegible] L [illegible] No [illegible]. [illegible]

```
?- melos(a, [1,2,3,a,b]).        ?- melos(yellow, [red, blue, green]).
Yes                              No
```

(δ) [illegible] element(L,N,X) [illegible] X [illegible] N-[illegible] L. [illegible]

```
?- element([a,b,c,d], 3, X).     ?- element([a, b, c], 1, X).
X = c                            X = a

?- element([a, [c,e], d], 2, X). ?- element([[a,b], [c], d], 4, X).
X = [c,e]
                                 No
```

(ε) [illegible] max(L,X) [illegible] X [illegible] L ([illegible] L [illegible]). [illegible]

```
?- max([13,52,12,29], X).        ?- max([-13, 14, -32, 9], X).
X=52                             X=14
```

ΣΥΜΠΛΗΡΩΜΑΤΙΚΕΣ ΑΣΚΗΣΕΙΣ

(1) ũɟ Ÿɣ Ű̊Ű Űɞ ǝŬŰɗɔɦɟ ɖɛŬ `del(X,L,NL)`: ɸɘŬɓɟ ŸűŮɞ Űɞ ůŰɞɕɢŮɞ X Ŭ ɦ Űɗ ǝɑůŰŰ L ǝŬɞ Ů ɘůŰɟ ɏűŮɞ Űɗ ǝɑůŰŰ NL ´ɞɡ ŭŮɜ Űɞ ´Ůɟ ɚɘŬɛ ɓŸɜŮɑ ũɘŬ´ Ůɟ ŸűŮɓɛ Ŭ;

```
?- del(a,[1,2,3,a,b],L).
L=  [1,2,3,b]

?- del(blue, [red, blue, green, blue],L).
L = [red, green, blue] ->;
L = [red, blue, green]
```

(1) ũɟ Ÿɣ Ű̊Ű Űɞ ǝŬŰɗɔɦɟ ɖɛŬ `delall(X,L,NL)`: ɸɘŬɓɟ ŸűŮɞ ɦǝŮɠ Űɠ Ůɛ űŬɜɑŮɠ Űɞɡ ůŰɞɕɢŮɞɡ X Ŭ ɦ Űɗ ǝɑůŰŰ L ǝŬɞ Ů ɘůŰɟ ɏűŮɞ Űɗ ǝɑůŰŰ NL ´ɞɡ ŭŮɜ ´Ůɟ ɚɘŬɛ ɓŸɜŮǝŬɗɦǝɞɡ Űɞ ɟ . ũɘŬ´ Ůɟ ŸűŮɓɛ Ŭ;

```
?- delall(a,[1,α,2,3,a,b],L).
L= [1,2,3,b]

?- delall(blue, [red, blue, green, blue],L).
L = [red, green]
```