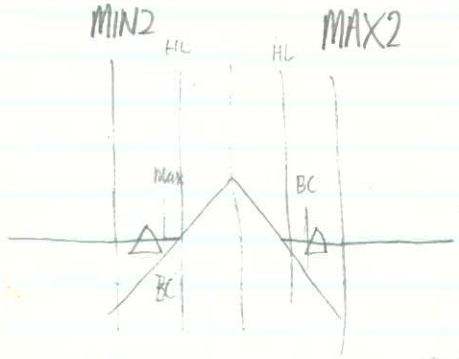
BULLT

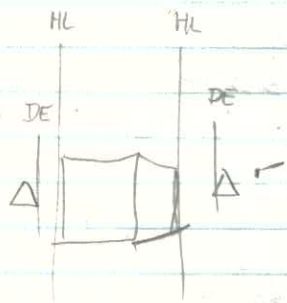
```
        LD A, (EXST1)
        AND 12
        JP Z- OBJ.
        AND 8
        JP Z —— HBLT.
MBLT    LD A, (MYBCT)
        DEC A
        LD (MYBCT), A
        JP NZ ——→
        LD A, (EXST1)
        AND 247
        LD (EXST1), A
        LD A, (EXST2)
        OR 8
        LD (EXST2), A
        JP HBLT
        LD DE, (MBULX)
        LD HL, (MBXLC+2)
        SBC HL, DE
        ADD HL, HL
        ADD HL, HL
        ADD HL, DE
        LD (MBULX), HL
        LD (XDIS), HL
        LD DE, (MBULZ)
        LD HL, (MBZLC+2)
        SBC HL, DE
        ADD HL, HL
        ADD HL, HL
        LD (MBULZ), HL
        LD (ZDIS), HL.
        LD HL, BLXTB
        LD (XTAB), HL
        LD HL, BLZTB
        LD (ZTAB), HL
        LD HL, MBXLC+8
        LD (XLOC), HL
        LD HL, MBZLC+8
        LD (ZLOC), HL
        LD HL, (MBLOR)
        SRL H
        RR L
        LD A, 4
        CALL MATMLT
        LD HL, BLXPR+8
        LD (XPERS), HL
        LD HL, BLYPR+8
        LD (YPERS), HL
        LD HL, BLYLC
        LD (YLOC), HL
        SUB A
        CALL PERSP.
        LD A, C
        AND A
        LD A, (PRSTA)
        JP Z ——
        AND 247
        LD (PRSTA), A
        SUB A
        CALL DLAY1
        JP HBLT
        OR 8
        LD (PRSTA), A
        LD HL, (SPPL1)
        LD (SPPL), HL
        LD HL, (XMAX)
        LD DE, (XMIN)
        SBC HL, DE
        SRL H
        RR L
        ADD HL, DE
        EX DE, HL
        LD HL, (MAX1)
        SBC HL, DE
        JP M ——
        LD HL, (MIN1)
        SBC HL, DE
        JP P ——
LD HL, (MBULZ)  LD A, (EXST1)
LD C, A         BIT 5, A
                JP Z ——
                LD A, (SAVZ+1)
                SUB H
                SUB 7
                JP C SAVEX
                BIT 4, A
                JP Z ——
                LD A, (MISZ+1)
                SUB H
                SUB 7
see Explosions  JP C MISEX
                AND 192
                JP Z ——
                LD A, (TKZ)
                SUB H
                SUB 7
                JP C TKEX
LD (UNCD), HL   LD HL, MBLVU
                CALL UNPLT
                LD HL, (SPPL)
                LD (SPPL1), HL
```

PRSTA	7	TK
	6	STK
	5	SAU
	4	MIS
	3	MBLT
	2	HBLT
	1	OBJ a
	0	OBJ b

0 if part unshootable
1 if shootable

eg prsta = 1 → block
= 2 → cube
= 3 → pyramid.





```
LD  A, (HBULZ)
ADD 3
SUB 8
JP  NC
LD A, (HBULX)
ADD 2
SUB 4
JP  C  CRASH
```

HL = Min + $\frac{1}{4}$.
DE = $\frac{1}{4}$

HBULLT

```
HBLT LD   A, (EXST1)
     AND  4
     JP Z OBJ
     LD A, (HBLCT)
     DEC A
     LD (HBLCT), A
     JP Z
     LD A,(EXST1)
     AND 251
     LD (EXST1), A
     LD A,(EXST2)
     OR 4
     LD (EXST2), A
     JP OBJ
     LD DE, (HBULX)
     LD HL, (HBXLC+2)
     SBC HL, DE
     ADD HL, HL
     ADD HL, HL
     ADD HL, DE
     LD (MBULX), HL
     LD (XDIS), HL
     LD DE, (HBULZ)
     LD HL, (HBZLC+2)
     SBC HL, DE
     ADD HL, HL
     ADD HL, HL
     ADD HL, DE
     LD (MBULZ), HL
     LD (ZDIS), HL
     LD HL, BLXTB
     LD (XTAB), HL
     LD HL, BLZTB
     LD (ZTAB), HL
     LD HL, MBXLC+8
     LD (XLOC), HL
     LD HL, MBZLC+8.
```

```
     LD (ZLOC), HL
     LD HL, (HBLOR)
     SRL H
     RRL
     LD A, 4
     CALL MATMLT
     LD HL, HBXPR+8
     LD (XPERS), HL
     LD HL, HBYPR+8
     LD (YPERS), HL
     LD HL, BLYLC
     LD (YLOC), HL
     SUB A
     CALL PERSP
     LD A, C
     AND A
     LD A, (PRSTA)
     JP Z
     AND 251
     LD (PRSTA), A
     SUB A
     CALL DLAY
     JP OBJ
     OR 4
     LD (PRSTA), A
     LD HL, (SPPL1)
     LD (SPPL), HL
     BIT 1, A
     JP Z
     AND 1
     JP Z
pyram LD HL, (MAX2)
     LD DE, (MIN2)
     SBC HL, DE
     SRL H
     RR L
     EX DE, HL
```

```
     PUSH HL
     LD BC, (XMAX)
     SBC HL, BC
     JP P
     POP HL
     ADD HL, DE
     ADD HL, DE
     ED BC, (XMIN)
     SBC HL, BC
     JP M
     JP
CM   LD HL, (MAX2)
     LD DE, (XMIN)
     SBC HL, DE
     JP M
     LD HL, (MIN2)
     LD DE, (XMAX)
     JP P
     JP
BN   LD A, (OBXA)
     LD B, A
     LD A, (HBULX+1)
     SUB B
     ADD 2
     SUB 4
     JP NC
BQ   LD A, (OBZ+1)
     LD B, A
     LD A, (HBULZ+1)
     SUB B
     ADD 3
     SUB 6
     JP C HBEXP
BP   LD HL, HBLVU
     LD (LINCD), HL
BQ   CALL LNPLT
     LD HL, (SPPL)
     LD (SPPL1), HL.
```

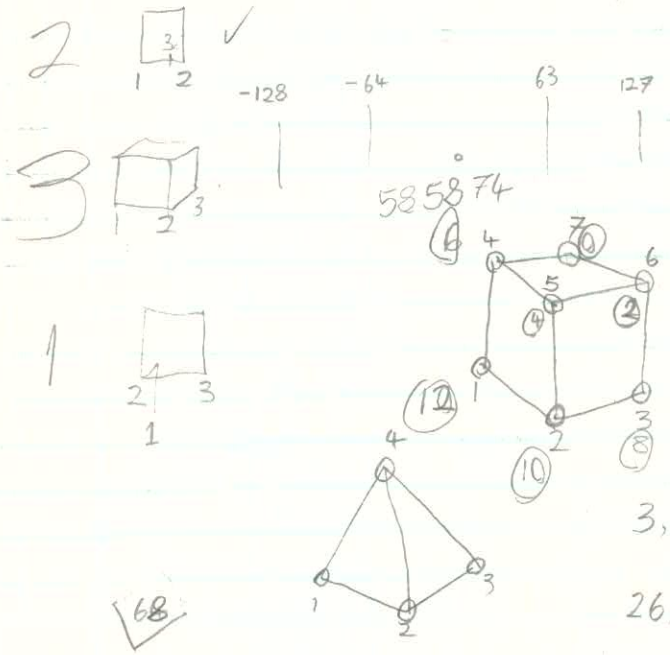
$2^n = 10^x$

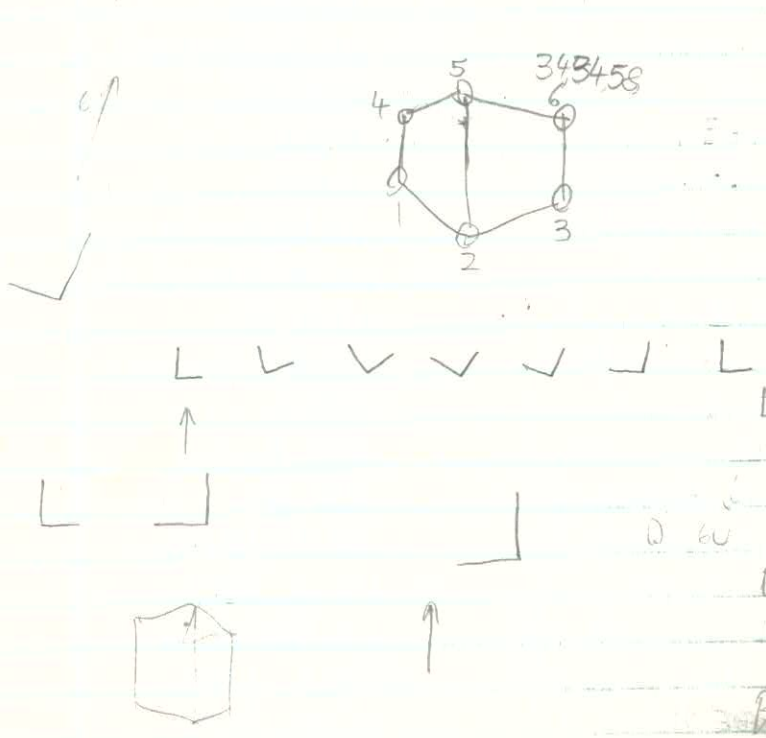
$n \log 2 = x$

12	1
10	2
8	3
6	4
4	5
2	6
0	7

XPERS

132, 213, 123






```
LD A, H
AND A
JP P
LD BC, (OBXPR+2)
SBC HL, DE
JP M
LD HL, (OBXPR+1)
SBC HL, DE

~~LD (PRSTA), A~~
LD A, H
AND A
JP P
LD BC, (OBXLQ+2)
SBC HL, BC
JP M        DEC
LD HL, (OBZLQ+2)
SBC HL, DE
JP P        INC
JP
BV LD BC, (OBXLQ+2)
SBC HL BC
JP M
LD HL, (OBZLQ+2)
SBC HL, DE
JP P
JP
BW LD HL, (OBOR)
LD DE, 128
ADD HL, DE
JP
BX LD HL, (OBOR)
LD DE, 65408
ADD HL, DE
BY LD (OBOR), HL
BZ CONT
```

OBJECTS

```
OBJ   LD A, (OB1Z+1)
      AND A
      JP M
      LD A, (OB1X+1)
      ADD 64
      SUB 128
      JP NC
      LD HL, (OB1X)
      LD DE, (OB1Z)
      LD A, 2
      JP
OR    LD A, (OB2Z+1)
      AND A
      JP M
      LD A, (OB2X+1)
      ADD 64
      SUB 128
      JP NC
      LD HL, (OB2X)
      LD DE, (OB2Z)
      LD A, 2
      JP
BS    LD A, (OB3Z+1)
      AND A
      JP M
      LD A, (OB3X+1)
      ADD 64
      SUB 128
      JP NC
      LD HL, (OB3X)
      LD DE, (OB3Z)
      LD A, 3
      JP
BT    LD HL, (OB4X)
      LD DE, (OB4Z)
      LD A, 1
```

LD BC, OB1VU

OB1VU = OB2VU

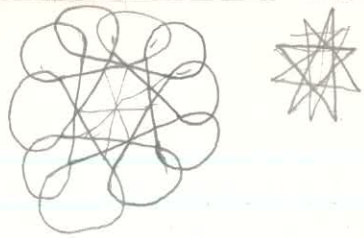
LD BC, OB2VU

LD BC, OB3VU

LD BC, OB4VU

```
      LD (
BU    LD (OBVU), BC
      LD C, A
      LD (OBX), HL
      LD (OBZ), DE
      LD (XDIS), HL
      LD (ZDIS), DE
      LD HL, OBXTB
      LD (XTAB), HL
      LD HL, OBZTB
      LD (ZTAB), HL
      LD HL, OBXLC+14
      LD (XLOC), HL
      LD HL, OBZLC+14
      LD (ZLOC), HL
      LD HL, (OBOR)
      SLR H
      RR L
      LD H, 0
      LD A, (EXSTI)
      OR C
      LD (EXSTI), A
      LD A, 7
      CALL MATMLT
      LD HL, OBYLC
      LD (YLOC), HL
      LD HL, OBXPR+14
      LD (XPERS), HL
      LD HL, OBYPR+14
      LD (YPERS), HL
      LD A, 3
      CALL PERSP
      LD HL, (XMAX)
      LD (MAX2), HL
      LD HL, (XMIN)
      LD (MIN2), HL
      LD A, C
      AND A
```

```
      LD A, (PRSTA)
      JP Z
      AND 252
      LD (PRSTA), A
      LD A, 3
      CALL DLAYI
      JP SCREEN
AND 253
      LD C, A
      LD A, (EXSTI)
      AND 3
      OR C
      LD (PRSTA), A
      LD HL, (SPPLI)
      LD (SPPL), HL
      LD HL, (OBXPR)+12
      LD DE, (OBXPR+10)
      SBC HL, DE
      JP P
      LD HL, (OBXPR+8)
      SBC HL, DE
      JP P
      LD HL, 60V
      JP
      LD HL, 120 BC
      JP
      LD HL, 0
      LD BC, (OBVU)
      ADD HL, BC
      LD (LINCD), HL
      CALL LNPLT
      LD HL, (SPPL)
      LD (SPPLI), HL
```



```
LD  HL, Y
    DE, X
SBC Y-X
ADD X+Y-X
2Y-2X+X
```

```
M     XOR A
S
E       11011010
SD      01101100
M       10110110
S     A=PRSTA
      BIT 1, A
      JP Z
      BIT 0, A
      JP Z
      LD HL,(OBXPR+6)
      LD DE,(OBXPR)
      SBC HL,DE
      ADD HL,HL
      ADD HL,DE
      LD B,H
      LD C,L
      LD HL,(OBXPR+10)
      LD DE,(OBXPR+4)
      SBC HL,DE
      ADD HL,HL
      ADD HL,DE
      SBC HL,BC
      SRL H
      RR L
      ADD HL,BC
```

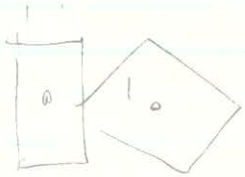
```
LD (OBXPR+6),HL
JP
LD HL,(OBXPR+6)
LD DE,(OBXPR)
SBC HL,DE
ADD HL,HL
ADD HL,DE
LD (OBXPR+6),HL
etc  OBXPR+10
```

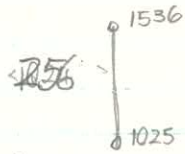
SCREEN.

```
CALL MHLC
CALL SHLC
LD HL, 18732
SUB A
7 { LD (HL), A
    INC H
LD HL, 18739
7 { LD (HL), A
    INC H
LD HL, 20492
8 { LD (HL), A
    INC H
LD HL, 20499
8 { LD (HL), A
    INC H.
CALL ERASE
CALL SDRAW
CALL MHLPT
CALL SHLPT
LD A, (SIGHT)
AND A
JP Z
LD HL, 18732
LD C, 64
7 { LD A, C
    RR C
    OR (HL)
    LD (HL), A
    INC H
LD HL, 18739
LD A, 2
7 { LD (HL), A
    INC H
    RL A
LD HL, 20492
LD C, 1
8 { LD A, C
    RL C
    OR (HL)
    LD (HL), A
    INC H
LD HL, 20499
LD A, 128
8 { LD (HL), A
    INC H
    RR A
JP
LD HL, 18732
7 { SET 7, (HL)
    INC H
LD HL, 20492
8 { SET 7, (HL)
    INC H
LD HL, 18739
7 { SET 7, (HL)
    INC H
LD HL, 20499
SET 7, (HL)
INC H
LD HL, 18476
LD B, 8
LD A, 255
LD (HL), A
INC L
DJNZ
LD HL, 20524
LD B, 8
LD (HL) A
INC L
DJNZ
LD HL, 18448
LD B, 8
SET 7, (HL)
INC H
DJNZ
LD HL, 20784
LD B, 7
SET 7 (HL)
INC H.
DJNZ
LD HL, (SPPL1)
LD (SPPL2), HL
LD HL, (DRTP1)
LD DE, (DRTP2)
LD (DRTP2), HL
LD (DRTP1), DE
LD (SPPL1), DE.
```

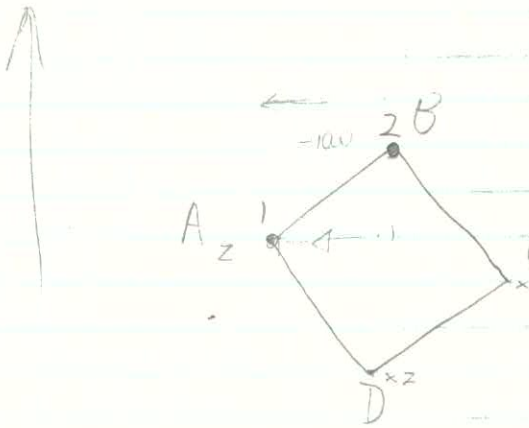
7	For	7
6	Back	6
5	Lef	5
4	Right	4
3	Left	3
2	Right	2
1		1
0		0
		85

CALL ROTA: DE=X BC=Z
HL=ORIent
PUSHHL
CD HL, (TURN)
JP HL
POP HL
LD HL, (OR





$A_x \ominus B_x$



LD A, (EXSTI)
AND 192
JP Z
etc

KBORD INTERPRETATION.

```
LD A, (JOYST)
AND A,
JP M - DEMO
BIT0, A      CALL, KEYIN.
CALL NZ - KEMPS
BIT1, A
JP NZ - AGF
BIT2, A
JP NZ - MILROGEN
LD (kmov), A
LD A, (OB1X+1)
ADD 2
SUB 4
JP NC
LD A, (OB1Z+1)
ADD 5
LD C, 191
JP C
SUB 12
LD C, 127
JP C
LD A, (OB2X+1)

LD HL, [MOTOBST]
CALL MESPR
LD C, 255
LD A, (KMOV)
AND C
LD (KMOV), A
BIT 5, A
LD DE, 0
JR Z
LD BC, SL
LD DE, 65520
BIT 4, A
```

CALL INTERP

LD HL [MOTOBST] PUSH BC CALL MESER POP BC

```
JR Z
LD BC, SR
LD DE, 16
BIT 3, A
JR Z
LD BC, EL
LD DE, 65504
BIT 2, A
JR Z
LD BC, FR
LD DE, 32
LD HL, (HLCNT)
ADD HL, DE
LD (TURN), BC
LD C, A
LD A, H
CP 184
JP M
LD H, 168
CP 168
JP P
LD H, 183
LD (HLCNT), HL
BIT 7, C
JP Z
LD DE, 65408
JP
BIT 6, C
JP Z
LD DE, 128
LD HL, (OB1Z)
ADD HL, DE
LD (OB1Z), HL
LD HL, (OB2Z)
ADD HL, DE
LD (OB2Z), HL
LD HL, (OB3Z)
ADD HL, DE
LD (OB3Z), HL
LD HL, (OB4Z)
ADD HL, DE
LD (OB4Z), HL
LD HL, (TKZ)
ADD HL, DE
```

```
LD (TKZ), HL
LD HL, (SAUZ)
ADD HL, DE
LD (SAUZ), HL
LD HL, (MZLOC)
ADD HL, DE
LD (MZLOC), HL
LD HL, (SEGZ)
ADD HL, DE
LD (SEGZ), HL
```

```
LD HL, (MBZLC+2)
ADD HL, DE
LD (MBZLC+2) HL
LD HL, (HBZLC+2)
ADD HL, DE
LD (HBZLC+2)
```

```
LD A, C
AND 63
JP Z
LD HL, (OBOR)
LD DE, (OB1X)
LD BC (OB1Z)
CALL ROTAT
LD (OBOR), HL
LD (OB1X), DE
LD (OB1Z), BC
LD DE, (OB2X)
LD BC, (OB2Z)
CALL ROTAT
LD (OB2X), DE
LD (OB2Z), BC
LD HL, (OB1X)
SBC HL, DE
PUSH HL
ADD HL, BC
LD (OB3Z), HL
POP HL
LD DE, (OB1Z)
ADD HL, DE
LD (OB4Z), HL
LD H, B
LD L, C
```

BC = HL = 22 (-5) DE = 12 (-4)

```
SBC HL,DE
PUSH HL
LD DE,(OBIX)
ADD HL,DE
LD (OB4X),HL
LD HL,(OB2X)
POP DE
ADD HL,DE
LD (OB3X),HL
LD A,(EXSTI)
AND 192
JP Z
LD DE,(TKX)
LD BC,(TKZ)
LD HL,(TKOR)
CALL ROTAT
LD (TKX),DE
LD (TKZ),BC
LD (TKOR),HL
LD A,(EXSTI)
BIT 4,A
JP Z
LD DE,(MXLOC)
LD BC,(MZLOC)
LD HL,(MSOR)
CALL ROTAT
LD (MXLOC),DE
LD (MZLOC),BC
LD (MSOR),HL
JP
AND 32
JP Z
LD DE,(SAUX)
LD BC,(SAUZ)
CALL ROTAT
LD (SAUX),DE
LD (SAUZ),BC
LD A,(EXSTI)
AND 8
JP Z
LD DE,(MBXLC+2)
LD HL,(MBULX)
SBC HL,DE
PUSH HL
LD BC,(MBZLC+2)
LD HL,(MBULZ)
SBC HL,BC
PUSH HL
LD HL,(MBLOR)
CALL ROTAT
LD (MBLOR),HL
LD (MBZLC+2),BC
LD (MBXLC+2),DE
POP HL
ADD HL,BC
LD (MBULZ),HL
POP HL
ADD HL,DE
LD (MBULX),HL
LD A,(EXSTI)
AND 4
JP Z
as above
with H
not M.
LD A,(EXST2)
AND A
JP Z
LD DE,(SEGX)
LD BC,(SEGZ)
CALL ROTAT
LD (SEGX),DE
LD (SEGZ),BC
LD BC,49150
IN A,(C)
AND 16
JP NZ
LD BC,65022
IN A,(C)
AND 2
JP Z
JP
JPFRAME
```

EXDT1 = H : No of points Seg1
L : No pts Seg2

EX DT2 = H : No pts Seg 3
L : No pts Seg 4

EXDT3. = HL = Lunch.

EXDT4 = HL = XTAB
5 = HL = ZTAB
6 = HL = YLOC.

for Tank

```
AND A
JP P
LD B, 1
JP
LD B, 3
CALL SCOPR
```

6,

TK: 8, 6, 6, 8 28

MS: 4, 4, 4, 6 18

SA 5, 5, 5, 5

EXPLOSIONS.

```
SAUEX/TKEX/MSEX
  LD A, (EXST1)
  AND 223 / ~~3~~ / 239
  LD (EXST1), A
  LD A, (EXST2)
  OR 32 / 128 / 16   ← LD B, 5/-/2
                       CALL SCOPR
  LD (EXST2), A
  LD HL, (SAUX) / TKX / MISX
  LD (SEGX), HL
  LD HL, (SAUZ) / TKZ / MISZ
  LD (SEGZ), HL
  LD HL, 1285 / 2054 / 1028
  LD (EXDT1), HL
  LD (EXDT2) HL   LD HL, -/1544/1030
  LD HL, SAEXV / TKEXV / MSEXV
  LD (EXDT3), HL
  LD HL, SAEXX / TKEXX / MSEXX
  LD (EXDT4), HL
  LD HL, SAEXY / TKEXY / MSEXY
  LD (EXDT6), HL
  LD HL, SAEXZ / TKEXZ / MSEXZ
  LD (EXDT5), HL
  LD HL, 0   LD HL, -/(TKOR)/(MSOR)
             LD (SEQOR), HL
  LD (SEGY), HL
  LD HL, 224
  LD (SEGYD), HL
  LD HL, (SEGX)
  LD (SEG1X), HL
  LD (SEG2X), HL
  LD (SEG3X), HL
  LD (SEG4X), HL
  LD HL, (SEGZ)
  LD (SEG1Z), HL
  LD (SEG2Z), HL
  LD (SEG3Z), HL
  LD (SEG4Z), HL
```

```
  LD A, 24
  LD (SEGCT), A
  JP ~~OBJ~~
```

```
HBLEX
  LD A, (EXST1)
  AND 251
  LD (EXST1), A
  LD A, (EXST2)
  OR 4
  LD (EXST2), A
  LD HL, (HBULX)
  LD (EXBLX), HL
  LD HL, (HBULZ)
  LD (EXBLZ), HL
  LD HL, (HBLOR)
  LD (EXBOR), HL
  JP ~~OBJ~~
```

H L D E B C A SP

(SEG,YD) 0 19 SCYLCO SCYLC+56

(SEG,YD)-19 (SEG,Y) (SEG,YD)-19

(EXDIC) (SEG,Y)

(SEG,YD) = (SEG,YD)-19.

(SEG,Y) = (SEG,Y) + (SEG,YD) - 19.

(YLOC

EXPLO

```
AND 12
CALL MBULEX
LD DE, 60
LD HL,(SEG1X)
ADD HL,DE
LD (SEG1X), HL
LD HL,(SEG4X)
ADD HL,DE
LD (SEG4X), HL
(SEG3Z)
(SEG4Z)

LD DE,65476
(SEG1Z)
(SEG2X)
(SEG2Z)
(SEG3X)

LD HL, (EXDT4)
LD (XTAB), HL
LD HL, (EXDT5)
LD (ZTAB), HL
LD HL, SGXLC+56
LD (XLOC), HL
LD HL, SGZLC+56
LD (ZLOC), HL
LD A, (SEGCT)
DEC A
LD (SEGCT), A
JP Z extend:
LD HL, SEGOR
SRL H
RR L
LD A, 26
ADD L
LD L, A
LD DE,(EXDT1)
LD A, D
```

```
LD A,(EXST2)
AND A
RET Z
```

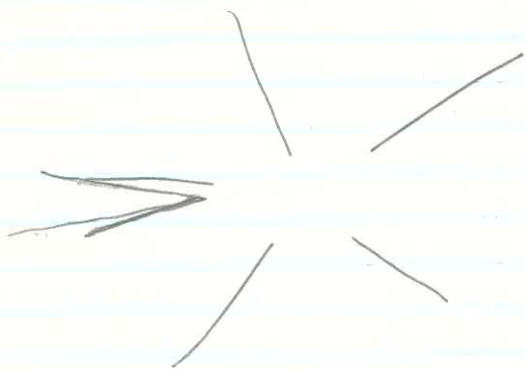
```
ADD E
LD DE,(EXDT2)
ADD D
ADD E

LD HL, (SEGX)
LD (XDIS), HL
LD HL, (SEGZ)
LD (ZDIS), HL
CALL MATMLT,
LD A, (EXST1)
AND 208
JP NZ
LD HL, 0
LD DE, 0
CALL RADAR
LD HL, SGXPR+56
LD (XPERS), HL
LD HL, SGYPR+56
LD (YPERS), HL
LD (SP), SP
LD SP, SGXLC+56
LD DE, (SEG1X)
LD BC, (EXDT1)
LD A, B ; LD B, C
DEC SP
DEC SP
POP HL
ADD HL, DE
PUSH HL
DJNZ
LD DE, (SEG2X)
LD B, A
DEC SP
DEC SP
POP HL
ADD HL, DE
```

```
PUSH HL
DJNZ
LD DE, (SEG3X)
LD BC, (EXDT2)
LD A, B
LD B, C

LD B, A
LD DE, (SEG4X)

LD SP, SGZLC+56
LD DE, (SEG1Z)
LD BC, (EXDT1)
LD A, B
LD B, C

LD DE, (SEG2Z)
LD B, A

LD DE, (SEG3Z)
LD BC, (EXDT2)
LD A, B
LD B, C

LD DE, (SEG4Z)
LD B, A

LD HL, (SEGYD)
LD DE, 19
SBC, HL, DE
LD DE, (SEGY)
ADD HL, DE
LD (SEGY), HL
LD HL, (EXDT6)
```

YLOC for segments is inverted

10 + 7 + 11 + 10 + 17 .

A 0000 0011



```
LD (YLOC), HL
LD DE, (SEGY)
LD SP, SGYL1+256
LD BC, (EXDT1)
LD A, B
ADD C
LD BC, (EXDT2)
ADD B
ADD C
LD B, H
LD C, L
EXX
LD B, A
EXX
LD A, (BC)
INC BC
LD L, A
LD A, (BC)
INC BC
LD H, A
ADD HL, DE
PUSH HL
EXX
DJNZ
EXX / LD (YLOC), SP
LD SP, (SPI) / LD A, (EXDT2)
LD HL, (SPPL) / SUB 4
LD (SPPL), HL / LD HL, (EXDT3)
LD (LINCD), HL
CALL PERSP
CALL PERCHR
```

```
PERCHR BIT 0, C
       JP NZ
       BIT 1, C
       JP Z
EF     CALL PERS2
       BIT 0, C
       JP NZ
       BIT 1, C
       JP NZ
       BIT 2, C
       JP NZ
       JP
EG     BIT 2, C
       JP Z
EH     CALL PERS4
       BIT 0, C
       JP NZ
       BIT 1, C
       JP NZ
       BIT 2, C
       JP NZ
EI     RET
EJ     POP HL
       JP expend.

       CALL LNPLT
       LD A, (EXDT2+1)
       CALL PERSP
       CALL PERCHR
       CALL LNPLT
       LD A, (EXDT1)
       CALL PERSP
       CALL PERCH
       CALL LNPLT
       LD A, (EXDT1+1)
       CALL PERSP
       CALL PERCH
```

```
       CALL LNPLT
       LD HL, (SPPL)
       LD (SPPL), HL
       RET
EXEND
       SUB A
       LD (SEGCT), A
       LD A, (EXST2)
       AND 208
       JP NZ
       LD (EXST2), A
       RET
       LD C, A
       LD A, (EXST1)
       OR C
       LD (EXST1), A
       POP HL
       JP WAVE

BULEX
       AND 8
       JP Z
       LD A, (EXST1)
       AND 247
       LD (EXST1), A
       LD HL, (MBULX)
       LD (EXBLX), HL
       LD HL, (MBULZ)
       LD (EXBLZ), HL
       LD HL, (HBLOR)
       LD (EXBOR), HL
       LD HL, BEXXT
       LD (XTAB), HL
       LD HL, BEXZT
       LD (ZTAB), HL
       LD HL, BEXXL+20
       LD (XLOC), HL
       LD HL, BEXZL+20
```

LD A, (EXST2)
AND 240
LD (EXST2), A

```
LD (ZLOC), HL
LD A, 10
LD HL, (EXBLX)
LD (XDIS), HL
LD HL, (EXBLZ)
LD (ZDIS), HL
LD HL, (EXBOR)
SRA H
RR L
CALL MATMULT
LD HL BEXXP+20
LD (XPERS), HL
LD HL, BEXXP+20
LD (YPERS), HL.
LD A, 6
LD HL, BEXYR
LD (YLOC), HL
CALL PERSP
LD A, C
AND A
RET NZ
LD HL, (SPPL1)
LD (SPPL), HL.
LD HL, BEXVU
LD (LINCD), HL
CALL LNPLT
LD HL, (SPPL)
LD (SPPL1), HL
RET
```

CRASH

```
LD HL,(DRTP)
LD (SPPL), HL
LD HL, CRAVU
LD (LINCD), HL
CALL LNPLT
LD HL(SPPL)
LD (SPPL1), HL
CALL SDRAW.
LD A, 250
CALL DLAY1
LD A, (SHIPS)
DEC A
LD (SHIPS), A
JP Z
LD HL, [GAME OVER]
CALL MESPR
LD A,
CALL DLAY1
CALL ATTRT
```

CALL CLS.

SCOPR

```
LD HL, (SCORE)
LD A,B
DAA
ADD L
DAA
LD L,A
JP NC
INC H
LD A, H
DAA
LD H, A
LD DE,(NMAN)
PUSH HL
SBC HL,DE
JP M
LD A,(SHIPS)
INC A
LD (SHIPS),A
SLA E
RLD
LD (NMAN),DE
POP HL
LD (SCORE),HL
LD A,H
RLCA
RLCA
RLCA
RLCA
AND 16
LD BC, 16473
JP Z
CALL NUMBA
INC C
LD A,(SCORE+1)
AND 16
JP Z
```

```
CALL NUMBA
INC C
LD A,(SCORE)
RRCA
RRCA
RRCA
RRCA
AND 16
JP Z
CALL NUMBA
INC C
LD A,(SCORE)
AND 16
CALL NUMBA
SUBA
INC C
CALL NUMBA
INC C
CALL NUMBA
RET.
```

MESPR

HL = Addr of Message

; Scr. addr, Xlen, Xlen, Message

```
LD E,(HL)
INC HL
LD D,(HL)
INC HL
LD C,(HL)
INC HL
LD B,(HL)
INC HL
LD A,B
EX AF,AF'
LD A',E
EXX
LD C',A'
EX AF,AF'
LD B',A
EXX
LD A,(HL)
INC HL
LD(DE),A
DJNZ
EXX
LD A,B'
EXAF,AF
LD A',C
EXX
LD E,A'
EX AF,AF
LD B,A
INC D
DEC C
JP NZ
RET
```

MESER

```
LD E,(HL)
INC HL
LD D,(HL)
INC HL
LD C,(HL)
INC HL
LD B,(HL)
LD H,E
LD L,B
SUB A
LD (DE),A
INC E
DJNZ
INC D
LD E,H
LD B,L
DEC C
JP NZ
RET.
```

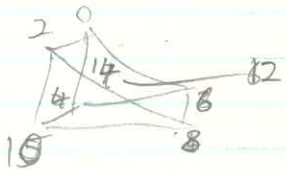
MESPR 24~~5~~~~10~~
~~STA~~ ~~5E7D~~
MESER ~~35EA8~~ ~~245~~ ~~80~~ 24455
NOS ~~5EC5~~ ~~24484~~
24357

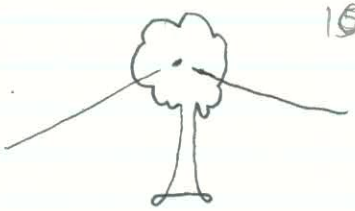
✓ NUMBA

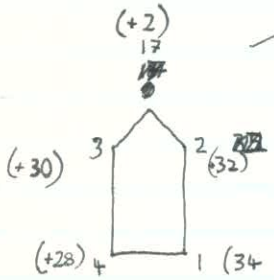
PUSH BC
~~ADD~~ ADD 16
RLCA
RLCA
RLCA
LD D, B
LD E, C
LD B, 7
LD HL, NUMBERS
ADD A
LD L, A
LD A, (HL)
LD (DE), A
INC HL
INC D
DJNZ
POP BC
~~GOTO~~, RET

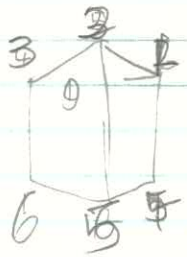
293 ~~messages~~ CHSET.
≈ 3K line data

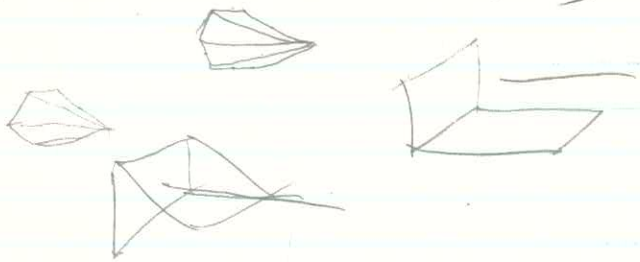
46848
SPPL2 ↓
55040
SPPL1 ↓
63232.

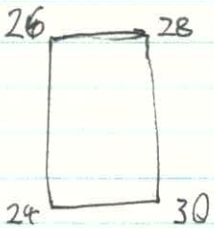




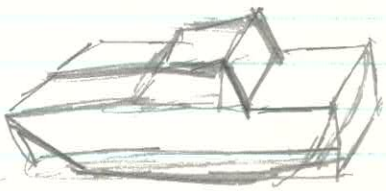








VUA if 30 < 2 and
VUE if 2 < 32
VU B if 34 < 32
VU D if 30 < 28
VUC if else.
1



TABS:

TKTAB	0
	31
STKTAB	32
	55
MSTB	56
	69
BULTB	70
	77
OBTB	78
	91
EXTRT	92
	108
	120
	132
	147
EXSAT	148
	156
	168
	178
	187
EXMST	188
	196
	204
	212
	223
EXBLT	224
	~~244~~ 243

Mess 52800

LINCDS.

TANK:	VUA	0	0
	VUB	82	145
	VUC	220	306 → 418
	VUD	310	49556 ~~419~~ (53666)
	VUE	448	49717
STNK	~~VUA~~	~~530~~	
	VUB	588	530 (53778)
	VUC	686	628
	VUD	752	726
	~~VUE~~	~~850~~	
SAUC	SAUVU	908	824
MISS	VUA	998	914
	VUB	1072	988
	VUC	1170	1086
MBLVU		1244	1160
~~MBLVU~~		~~1270~~	1186
OB1VU		1296	1186
OB2VU		1356	1246
		1416	1306
OB3VU		1536	1366
		1596	1424
		1656	1484
OB4VU		1776	1526
		1836	1586
		1896	1646
TKEXV	1	2016	1720
	2	2097	1817
	3	2154	1874
	4	2211	1931
SAEXV	1	2308	1996
	2	2365	2053
	3	2422	2110
	4	2479	2167
MSEXV	1	2536	2224
	2	2577	2273
	3	2618	2314
	4	2659	2355

LOMEM: Matdata.
Hill Data
Radar lines
Tan Data
Shape Tables.
Line Tables.

Hills Data

~~32768~~

HISCORE 1 0 2 7 0 0 0

Matdata	32767
	31744
TANDATA	31743
	31488.
HILLDATA	31487
	26880.
RADARDATA	26879
	25344

116 64

1

-0000-0.

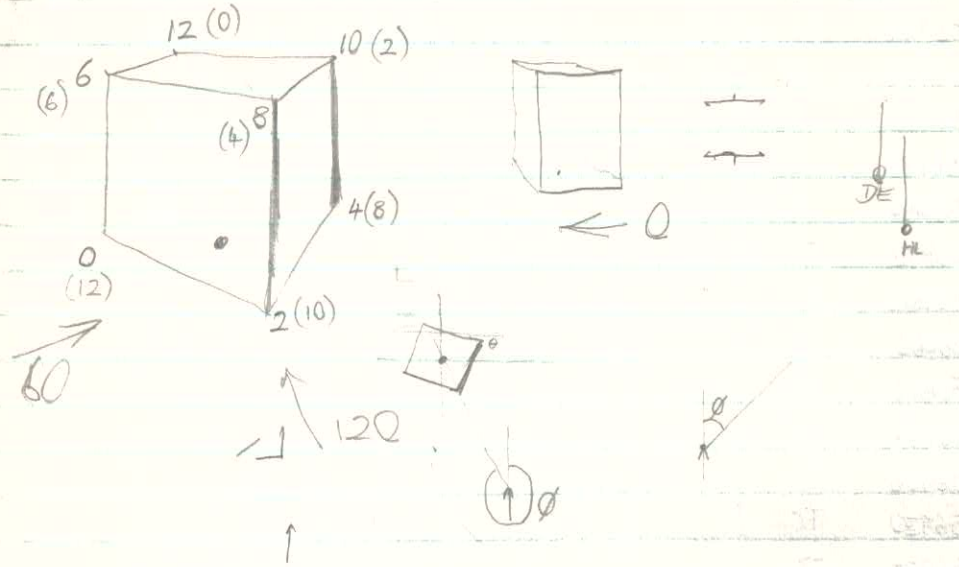
P R

R

	MBEXV	~~2708~~	2708		2396	
	HBEXV	~~2784~~	2750		2436	
		~~1760~~			SGYL1	340
						395
45500	XTAB	0		46736	XPERS	0
		243				55
	ZTAB	244		46792	YPERS	56
		487				111
	YLOC	488				
		731	Data files			1348 bytes.
	SXLOC	732				
		779				
	SZLOC	780				
		827				
	SYLOC	828				
		839				
26340	SXLC1	0				
		11				
	SZLC1	12				
		23				
	MYLC1	24				
		37				
26378 XLOC	TXLOC	38				
		69				
	STXLC	38				
		61				
	MSXLC	70				
		83				
	MBXLC	84				
		91				
	HBXLC	92				
		99				
	OBXLC	100				
		113				
	SGXLC	114				
46510		169				
ZLOC	As above	170				
		339				

	TXTAB :	32	53667 55690	sm I	TKYLC :	32	53739 → 53775 56178	TC ✓
	STXTB :	24	55722	sm I	STYLC :	24	56210	TC ✓
	MSXTB :	14	55746	sm I	MSYLC :	14	56234	TC ✓
	BULXT :	8	55760	sm I	BULYL :	8	56248	TC ✓
	OBXTB :	14	55768	sm I	OBYLC :	14	56256	TC ✓
1	TKEXX :	16	55782	sm ✓	TKEXYL	16	56270	TC ✓
2		12				12		
3		12				12		
4		16				16		
	SAEXX :	10	55838	sm ✓	SAEXYL :	10	56326	TC ✓
		10				10		
		10				10		
		10				10		
	MSEXX :	8	55878	sm ✓	MSEXYL	8	56366	TC ✓
		8				8		
		8				8		
		12				12		
	BLEXX :	20	55914	sm I	BLEXYL	20	56402	TC ✓
	TZTAB :	32	53703 55934	sm I	SXLOC	12	56422	TC ✓
	STZTB :	24	55966	sm I		12		
	MSZTB :	14	55990	sm I		12		
	BULZT :	8	56004	sm I		(12)		
	OBZTB :	14	56012	sm I	SZLOC	12	56470	TC ✓
	TKEXZ :	16	56026	sm ✓		12		
		12				12		
		12	56			(12)		
		16			SYLOC	12	56518	TC ✓
	SAEXZ :	10	56082	sm ✓	TXLOC	32	56530	TC ✓
		10			STXLC	24	56562	TC ✓
		10	40		MSXLC	14	56586	TC ✓
		10			MBLXL	8	56600	TC ✓
	MSEXZ :	8	56122	sm ✓	HBLXL	8	56608	TC ✓
		8	36		OBXLC	14	56616	TC ✓
		8			EXXLC	56	56630	TC I
		12			EXBXL	20	56686	TC ✓
	BLEXZ :	20	56158	SM I	[illegible]	12		

TZLOC	32	56706	TC	✓
STZLC	24	56738	TC	✓
MSZLC	14	56762	TC	✓
MBLZL	8	56776	TC	✓
HBLZL	8	56784	TC	✓
OBZLC	14	56792	TC	✓
EXZLC	56	56806	TC	I
EXBZL	20	56862	TC	✓
SXLC1	12	56882	TC	✓
SZLC1	12	56894	TC	✓
MYLC1	14	56906	TC	✓
SGYL1	56	56920	TC	I
XPERS	56	56976	TC	I
YPERS	56	57032	TC	I
		57087		




```
LD  HL,(XPERS+10)
LD  DE,(XPERS+8)
SBC HL,DE
JP  M
```

DE =

dF 0 1 0 - - -

BLOOD! ~~HL = 0BX DE = 0BZ~~.

```
LD HL,63870
LD B,192
~~LD POSTPAIR~~
LD ~~D~~,(HL)
```

B = Score Increase.

```
LD   HL, (SCORE)
LD   A, L
ADD  B
DAA
LD   L, A
JP   NC
LD   A, H
INC  A
DAA
LD   A, H

LD   A, (SCORE+1)
AND  A
JP   Z
AND  15
```

```
LD   A, (PRSTA)
AND  3
CP   2
JP   NZ
LDH (MAX2)
LD A, H
AND A
LD DE, 128
ADD HL, DE
LD  A, H
CP  1
JP P
LD HL, (MIN)
ADD HL, DE
LD A, H
AND A
JP P
```

256