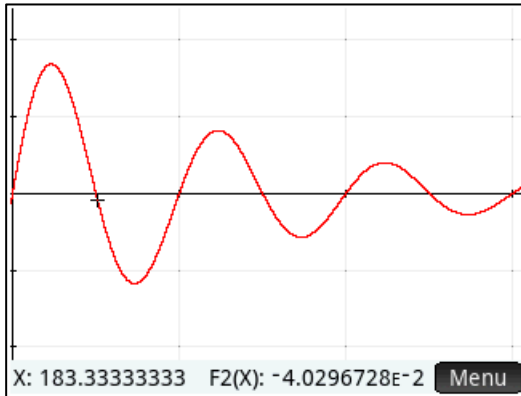


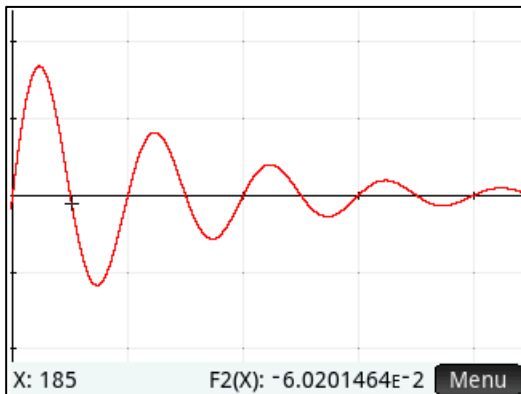
Axis adjustment

The program arranges so that the cursor step becomes one of the numbers

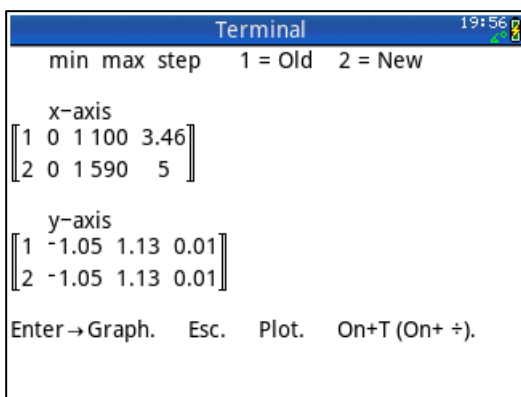
...
0.1 0.2 0.5
1 2 5
10 20 50
...



Such x-coordinates are not pleasant when the graph is to be examined.



Better here. Automatically, Xmax has been increased from 1100 to 1590. As a result, a step for the cursor has been changed from 3.46 to 5 precisely.



This time, we haven't changed the y-axis.

```
EXPORT AXADJ6A()  
BEGIN
```

```
LOCAL incr;
```

```
PRINT();  
PRINT("The program arranges so that the cursor  
step becomes one of the numbers");  
PRINT("  ...");  
PRINT("0.1 0.2 0.5");  
PRINT("1 2 5");  
PRINT("10 20 50");  
PRINT("  ...");  
PRINT("");  
PRINT("Enter");
```

```
WAIT();
```

Continues.

```
//Old step for cursor.
(Xmax-Xmin)/318►incr;
{1,Xmin,Xmax,incr}►L1;
```

```
CHOOSE(U,"Adjust x-axis?",
"No","Automatically","Xmin + step");
```

```
IF U=3 THEN
REPEAT
INPUT({{Xmin,[0],[14,34,2]},{incr,[0],[62,34,2]}},
"Xmin and step(318)","Xmin","Step");
UNTIL incr>0;
END;
```

```
IF U=2 OR U=3 THEN
```

```
IP(LOG(incr))►A;
FP(LOG(incr))►B;
```

```
IF LOG(incr)<0 THEN
A-1►A;
B+1►B;
END;
```

```
//10^A►C 10^B►D
ALOG(A)►C;
ROUND(ALOG(B),-9)►D;
CASE
IF D>5 THEN 10►D END;
IF D>2 THEN 5►D END;
IF D>1 THEN 2►D END;
IF D≤1 THEN 1►D END;
END;
```

```
//New step for cursor.
C*D►incr;
```

```
incr*IP(Xmin/incr)►Xmin;
Xmin+318*incr►Xmax;
END;
```

```
{2,Xmin,Xmax,incr}►L2;
```

```
//Old step for cursor.
(Ymax-Ymin)/218►incr;
{1,Ymin,Ymax,incr}►L3;
```

```
CHOOSE(V,"Adjust y-axis?",
"No","Automatically","Ymin + step");
```

```
IF V=3 THEN
REPEAT
INPUT({{Ymin,[0],[14,34,2]},{incr,[0],[62,34,2]}},
"Ymin and step(218)","Ymin","Step");
UNTIL incr>0;
END;
```

```
IF V=2 OR V=3 THEN
```

```
IP(LOG(incr))►A;
FP(LOG(incr))►B;
```

```
IF LOG(incr)<0 THEN
A-1►A;
B+1►B;
END;
```

```
//10^A►C 10^B►D
ALOG(A)►C;
ROUND(ALOG(B),-9)►D;
CASE
IF D>5 THEN 10►D END;
IF D>2 THEN 5►D END;
IF D>1 THEN 2►D END;
IF D≤1 THEN 1►D END;
END;
```

```
//New step for cursor.
C*D►incr;
```

```
incr*IP(Ymin/incr)►Ymin;
Ymin+218*incr►Ymax;
END;
```

```
{2,Ymin,Ymax,incr}►L4;
```

```
ListToMat({L1,L2})►M1;
ListToMat({L3,L4})►M2;
ROUND(M1,-3)►M1;
ROUND(M2,-3)►M2;
```

Continues.

```
PRINT();
PRINT("  min max step  1 = Old  2 = New");
PRINT("");
```

```
PRINT("  x-axis");
PRINT2D(M1);
```

```
PRINT("");
```

```
PRINT("  y-axis");
PRINT2D(M2);
```

```
PRINT("");
```

```
PRINT("Enter→Graph.  Esc.  Plot.  On+T (On+
÷).");
```

```
STARTVIEW(1);
```

```
END;
```

	A	B	C	D	E	F	G
LOGSPC							02:19
incr	Lgincr	ipLg	fpLg	ip2	fp2	ALGfp2	
1 3 900	3.59	3	0.59	3	0.59	3.9	
2 390	2.59	2	0.59	2	0.59	3.9	
3 39	1.59	1	0.59	1	0.59	3.9	
4 3.9	0.59	0	0.59	0	0.59	3.9	
5 0.39	-0.41	0	-0.41	-1	0.59	3.9	
6 0.039	-1.41	-1	-0.41	-2	0.59	3.9	
7 0.0039	-2.41	-2	-0.41	-3	0.59	3.9	
8							
9							
10							
=IF B6<0 THEN D6+1 ELSE D6 END							
Edit	Format	Go To	Select	Go ↓	Show		

A incr = Incremental movement of the cursor.

B Log A

C The integer part of B.

D The decimal part of B.

E IF B6<0 THEN C6-1 ELSE C6 END - 1 - 1 = - 2

F **See bottom line. IF B6<0 ...** - 0.41 + 1 = 0.59

G 10^F

	A	B	C	D	E	F	G
LOGSPC2							02:20
incr	ipLg	ALGip	fpLg	ALGfp	Adj	incrNy	
1 7.4	0	1	0.869	7.4	10	10	
2 0.74	-1	0.1	0.869	7.4	10	1	
3 0.074	-2	0.01	0.869	7.4	10	0.1	
4 3.9	0	1	0.591	3.9	5	5	
5 0.39	-1	0.1	0.591	3.9	5	0.5	
6 12	1	10	0.079	1.2	2	20	
7 0.012	-2	0.01	0.079	1.2	2	0.02	
8							
9							
10							
=CASE IF E4>5 THEN 10 END; IF E4>2 THEN 5 EN...							
Edit	Format	Go To	Select	Go →	Show		

A incr = incremental movement of the cursor.

B IP is integer part.

IF LOG(A4)<0

THEN IP(LOG(A4)) - 1

ELSE IP(LOG(A4)) END

C 10^B

D Simplified, without ROUND. FP is decimal part:

IF LOG(A4)<0

THEN FP(LOG(A4)) + 1

ELSE FP(LOG(A4)) END

E 10^D

F CASE

IF E4>5 THEN 10 END;

IF E4>2 THEN 5 END;

IF E4>1 THEN 2 END;

IF E4≤1 THEN 1 END;

END

G New increment, step for the cursor = C · F.