

l	w	A
35	1	35
34	2	68
33	3	99
32	4	128
31	5	155
...
20	16	320
19	17	323
18	18	324
17	19	323
16	20	320

$+33 \rightarrow -2$
 $+31 \rightarrow -2$
 $+29 \rightarrow -2$
 $+27 \rightarrow -2$

$(-2x+39)$
 $f(x) = f(x-1) + (-2x+39)$

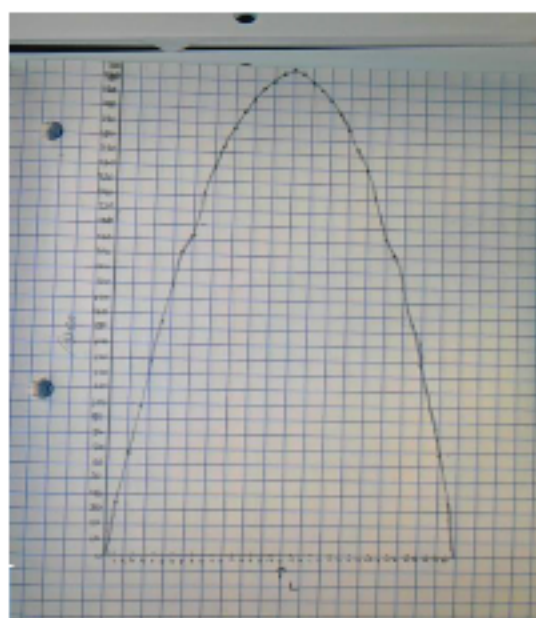
1st M2 1.4



- ④ Quadratic because:
 - table 2nd difference was constant: -2
 - graph parabola (hill, U-shape)
- ⑤ Both are quadratic functions.

$A = l \cdot w$ $l = x$
 $f(x) = x(36-x)$ $w = 36-x$
 $f(x) = 36x - x^2$, Explicit

l	w	A
35	1	35
34	2	68
33	3	99
32	4	128
31	5	155
...
20	16	320
19	17	323
18	18	324
17	19	323
16	20	320



3rd M2 1.4

Explicit
 $A = l \cdot w$ $l = x$ $w = 36-x$
 $f(x) = x \cdot (36-x)$
 $f(x) = 36x - x^2$
 $f(5) = 180 - 25 = 155$

recursive
 $f(x) = f(x-1) + (-2x+39)$ $f(1) = 35$
 $-2(2) + b$
 $-4 + b = 33$
 $b = 37$

6th M1 1.7 (cont.)

Table

x	f(x)
0	100,000
1	40,000
2	16,000
3	6,400
4	2,560
5	1,024
6	410
7	164
8	66

60% = .60
 $(.60)(40,000) = 24,000$ gave away
 $(.60)(16,000) = 9,600$ gave away
 $(.40)(16,000)$

Recursive
 $f(x) = f(x-1) \cdot (.40); f(0) = 100,000$

Explicit
 $f(x) = 100,000 \cdot (.40)^x$

$f(3) = 100,000 \cdot (.40)^3$
 $f(5) = 100,000 \cdot (.40)^5$

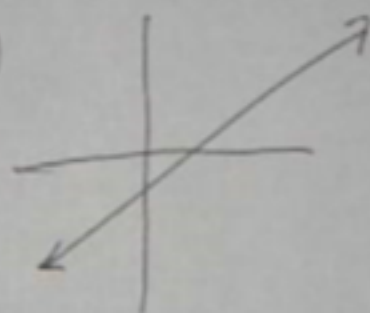
Is the function arithmetic or geometric. How do you know?

① 2, 6, 18, 54

③

②

x	f(x)
1	9
2	7
3	5
4	3
5	1



④ $f(x) = f(x-1) \cdot 3; f(0) = 2$

⑤ $f(x) = 4x + 2$

6th Exit Ticket