

4th M1 1.7  
(part 2 #3-5)

days	1	2	3	4	5
candy	1	2	4	8	16

Recursive:  $f(x) = f(x-1) \cdot 2; f(1) = 1$   
 Explicit:  $f(x) = 1 \cdot 2^{(x-1)}$   
 $f(5) = 1 \cdot 2^{(5-1)}$   
 $f(5) = 2^{(4)}$   
 $f(5) = 2 \cdot 2 \cdot 2 \cdot 2$   
 $f(5) = 16$

Recursive:  $f(x) = f(x-1) \cdot 2$   $f(1) = 1$   
 Explicit:

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
9	26
10	10
11	4
12	2
13	1
14	0

60%  
 $(.60)(100,000)$   
 60,000 give away  
 100,000 total  
 - 60,000 give away  
 40,000 left

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

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

60%  
 $(.60)(40,000)$   
 24,000 give away  
 40,000 total  
 - 24,000 give away  
 16,000 left

4th M1 1.7  
(part 3 #6-8)

Summary: Exponential Functions (Multiplying)

- List: 3, 6, 12, 24, 48
- Table:
 

x	f(x)
1	3
2	6
3	12
4	24
5	48
- Graph:
 

Curve
- Recursive:  $f(x) = f(x-1) \cdot 2$ ;  $f(1) = 3$ 

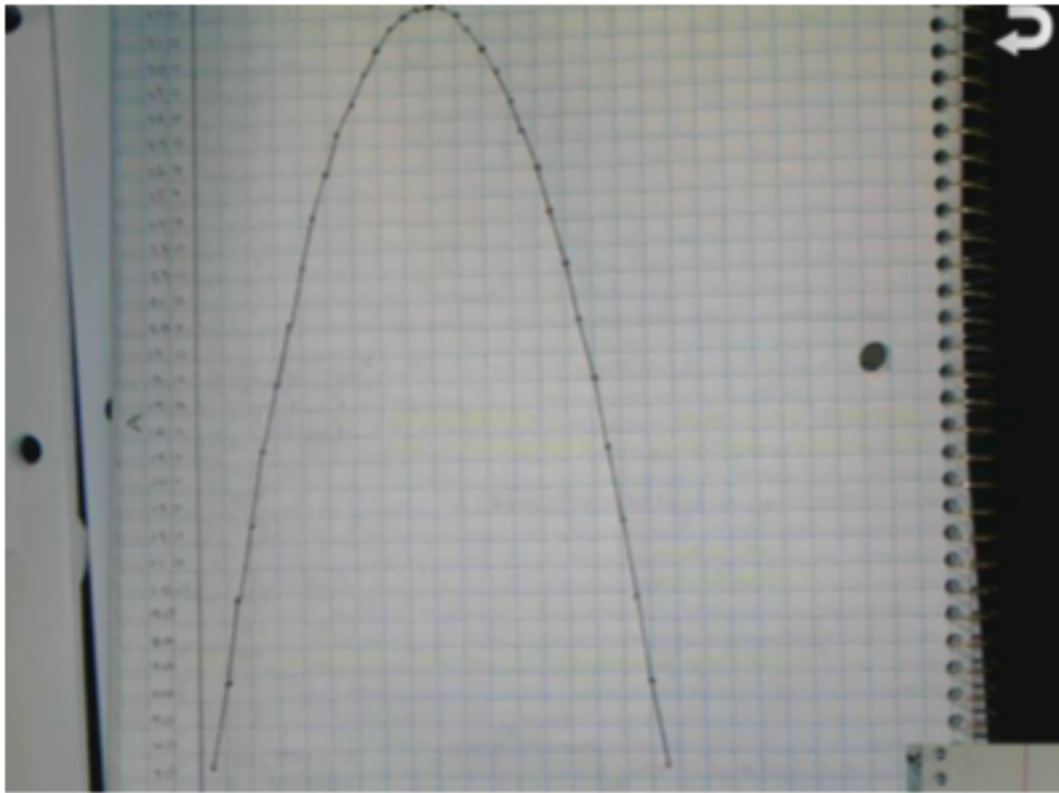
*multiple by 2* (pointing to the multiplier 2)  
*started at x=1* (pointing to f(1) = 3)
- Explicit:  $f(x) = 3 \cdot 2^{(x-1)}$ 

*starting term* (pointing to the 3)

**4th Summary:  
Exponential  
Functions**

	A	L	W	H
1	35	32	30	28
2	48	33	29	155
3	124	34	28	97
4	155	35	27	68
5	90		26	35
6	202		25	
7	224		24	
8	243		23	
9	260		22	
10	275		21	
11	288		20	
12	299		19	
13	308		18	
14	315		17	
15	320		16	
16	323		15	
17	324		14	
18	323		13	
19	320		12	
20	315		11	
21	308		10	
22	299		9	
23	288		8	
24	275		7	
25	260		6	
26	243		5	
27	224		4	
28	202		3	
29	180		2	
30	155		1	

**7th M2 1.4 Table**



7th M2 1.4 Graph

Recursive

L	A
1	35
2	39
3	37
4	32
5	31

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

7th M2 1.4  
Equations

Explicit Variable

$A = L \cdot W$      $L = x$      $W = (36 - x)$

$f(x) = x(36 - x)$   
 $f(x) = 36x - x^2$

$f(5) = 36(5) - 5^2$   
 $= 180 - 25$   
 $= 155$