Inv. 2.1

A

1.

Original Square		New Rectangle			Difference of Areas (m2)
Side Length (m)	Area (m2)	Length (m)	Width (m)	Area (m2)	
2	4	4	0	0	4
3	9	5	1	5	4
4	16	6	2	12	4
5	25	7	3	21	4
6	36	8	4	32	4
n	n^2	$n+2$	$n-2$	$(n+2)\cdot(n-2)$	4

2. Cannot have a side length that is negative

3. The new rectangle's area is always 4 less

Compare n^2 and $(n+2)(n-2)$

binomial • binomial

	n	-2
n	n^2	$-2n$
2	$2n$	-4

$n^2 - 4$

$n^2 - [n^2 - 4]$

$n^2 - n^2 + 4$

4

(B)

1. $A_1 = n^2$
2. $A_2 = (n+2)(n-2)$

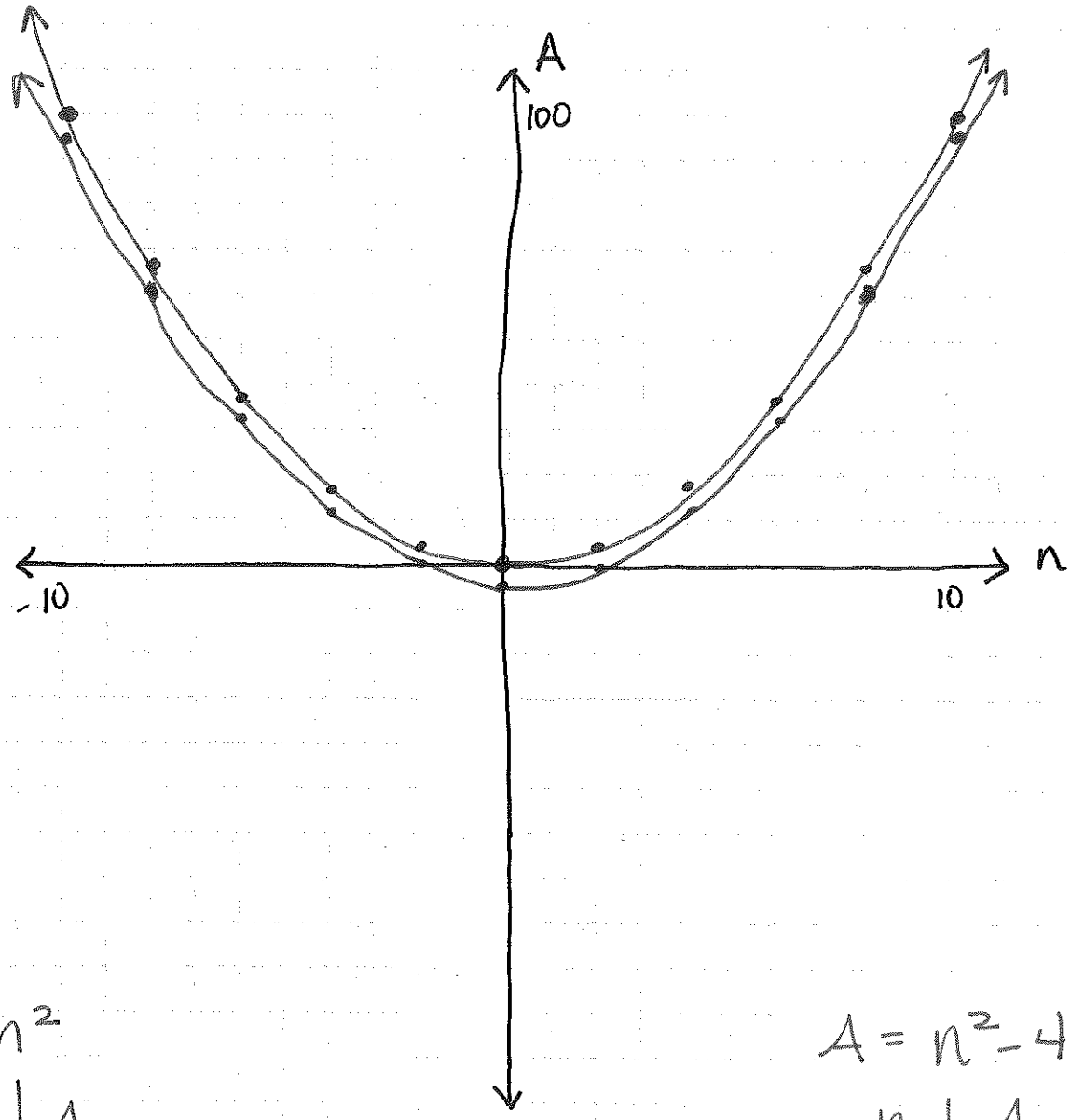
   or

   $A_2 = n^2 - 4$

3. The conclusion is that the new rectangle is 4 units less than the original

   $n^2 - 4$

(c)



$A = n^2$

n	A
-10	100
-8	64
-6	36
-4	16
-2	4
0	0
2	4
4	16
6	36
8	64
10	100

$A = n^2 - 4$

n	A
-10	96
-8	60
-6	32
-4	12
-2	0
0	-4
2	0
4	12
6	32
8	60
10	96