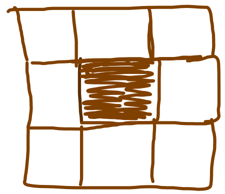
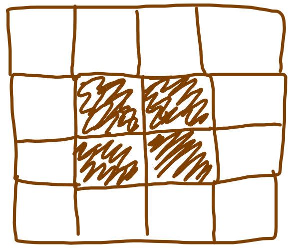
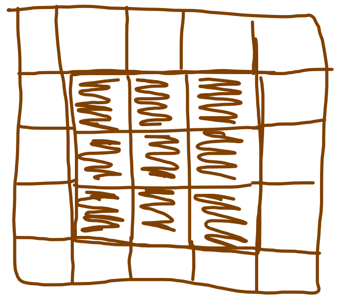


patio #1

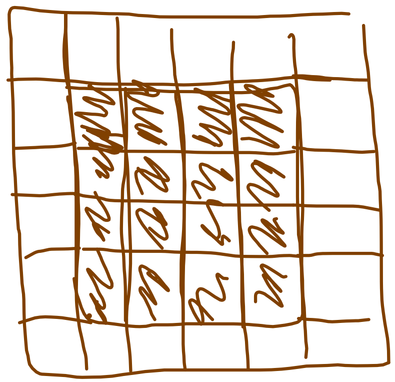
(patio # x 4) + 4 = white tiles



Patio #2



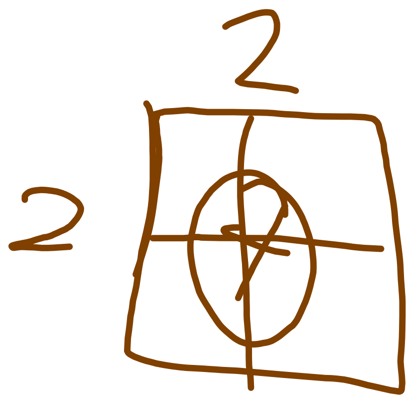
#3



#4

Square

a # multiplied by itself



Patio Number	# of Brown Tiles	# of white Tiles	Total # of Tiles
1	1	8	9
2	4	12	16
3	9	16	25
4	16	20	36
5	25		49
6	36		64
7	49		81
8	64		
n	n^2	$(n\cdot 4)+4$	n^2+4n+4

+7
+9
+11
+13
+15
+17

Patio #	total # of tiles
$5+2=7^2$	$= 49 = n^2$
$6+2=8$	$\sqrt{64}$
$7+2=9$	$\sqrt{81}$
8	
n	n^2+4n+4
	$(n+2)^2$

$9^2 + 4 \times 4$

$81 + 4 \times 4$

$81 + 16 = 97$

$(n+4)x$

$n \overset{+4}{x} + 4$

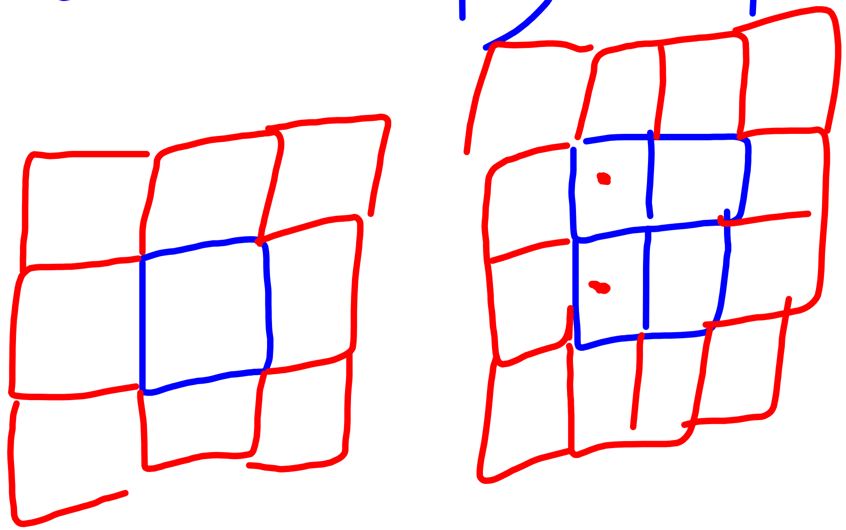
$5 \overset{+4}{x} 9 = 45 + 4 = 49$

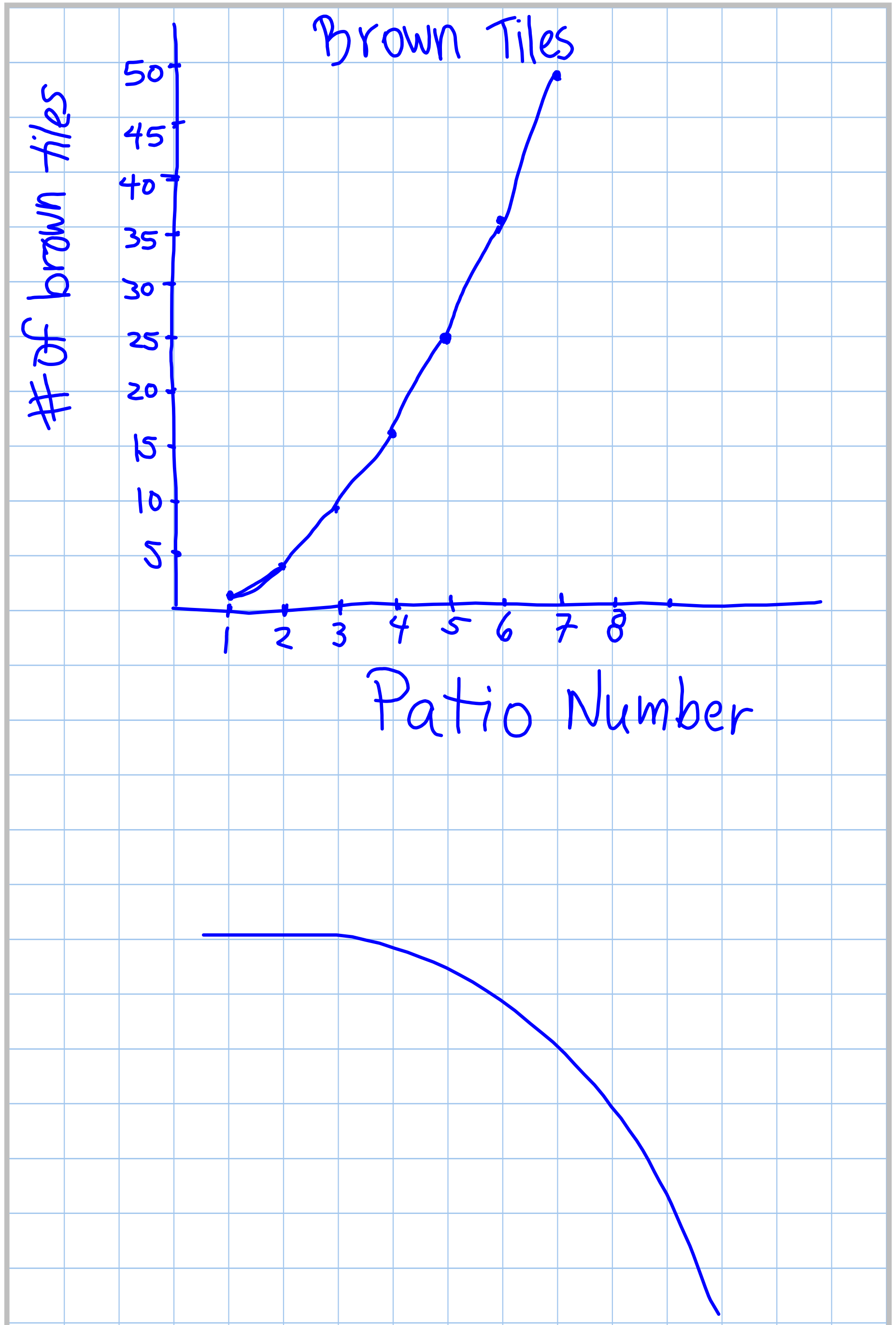
$6 \overset{+4}{x} = 10 = 60 + 4 = 64$

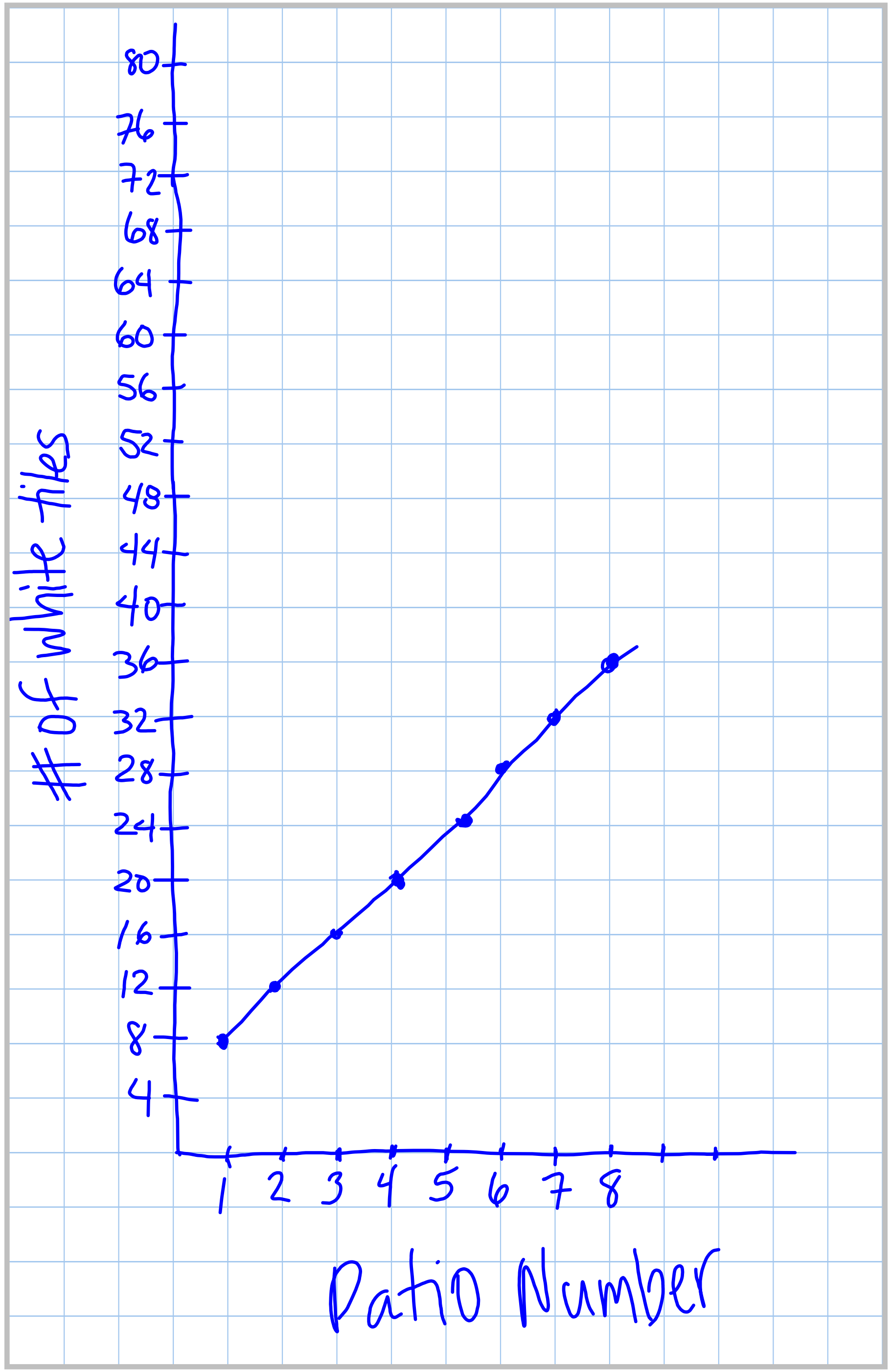
Determing # of white tiles

* increasing by 4

(patio # × 4) + 4 = # white tiles




Brown Tiles
# of brown tiles
50
45
40
35
30
25
20
15
10
5
1
2
3
4
5
6
7
8
Patio Number



Title: Grid - large (9 of 10)

How do you know your answers are correct.

Describe your methods for counting the different tiles.

What patterns do you see?

Can you come up with a rule for the number of tiles on the patio and the number on the border?

Test your rule with another example of a patio.

If there are thirty-six brown tiles, how many white tiles are there? Explain how you got there.

Can you make a square with forty-nine tiles? Explain why or why not.