Algebra 2 S1 Name: _____ Block: _____

Topic: Functions Explicit and Recursive Functions

Write the explicit and recursive function for each table.

1.

x	f(x)
0	-2
1	-9
2	-16
3	-23
4	-30

2.

x	g(x)
0	-3
1	2
2	7
3	12
4	17

3.

x	j(x)
0	1
1	6
2	36
3	216
4	1296

4.

x	f(x)
0	2
1	6
2	18
3	54
4	162

5.

x	g(x)
0	4
1	8
2	16
3	32
4	64

6.

x	h(x)
1	-2
2	-9
3	-16
4	-23
5	-30

7.

x	b(x)
1	1
2	2
3	4
4	8
5	16

8.

x	p(x)
1	5
2	-3
3	-11
4	-19
5	-27

9.

x	f(x)
1	-2
2	-9
3	-16
4	-23
5	-30

10.

x	h(x)
1	3
2	6
3	12
4	24
5	48

Algebra 2 S1 Name: _____ Block: _____

Given the following explicit functions, write the recursive function.

11. $f(x) = 3x + 2$

12. $g(x) = -2x + 5$

13. $h(x) = 4x - 2$

14. $j(x) = -3x - 8$

15. $t(x) = 5x - 7$

Given the following recursive functions, write the explicit function.

16. $f(x) = \begin{cases} 4 \; if \; x = 0 \\ f(x-1) + 5 \; if \; x > 0 \end{cases}$

17. $g(x) = \begin{cases} -5 \; if \; x = 0 \\ f(x-1) + 7 \; if \; x > 0 \end{cases}$

18. $j(x) = \begin{cases} -7 \; if \; x = 0 \\ f(x-1) - 9 \; if \; x > 0 \end{cases}$

19. $b(x) = \begin{cases} 2 \; if \; x = 0 \\ f(x-1) - 4 \; if \; x > 0 \end{cases}$

20. $f(x) = \begin{cases} 3 \; if \; x = 0 \\ f(x-1) + 1 \; if \; x > 0 \end{cases}$