



NAME _____

DATE _____

PERIOD _____

Lesson 2: I Rule!

Ready, Set, Go



Ready

Rewrite each expression as the product of two binomials.

Each expression involves two multiplication problems separated by a + or – sign. Each multiplication problem contains a matching binomial factor that can be factored out so that the expression becomes a product of two binomials.

Example:

- $3x(4x + 1) + 2(4x + 1) = (4x + 1)(3x + 2)$
- Factor out $(4x + 1)$ and write the numbers that remain $(3x + 2)$.
- Rewrite as $(4x + 1)(3x + 2)$.

1. $2x(5x + 3) + 7(5x + 3)$

2. $8x(x + 1) + 2(x + 1)$

3. $6x(x - 10) - 1(x - 10)$

4. $1x(3x + 4) + 5(3x + 4)$

5. $3x(8x + 3) - 4(8x + 3)$

6. $5x(2x + 6) + 2(2x + 6)$

7. $7x(-5x + 2) - 13(-5x + 2)$



NAME _____

DATE _____

PERIOD _____

8. $-4x(12x + 3) + 3(12x + 3)$

 **Set**

In each set of three functions, one will be linear, one will be exponential, and one will be a quadratic function. Explain the nature of change for the function and find an explicit and recursive equation for each.

9. a.

x	$f(x)$	Type of function and nature of change:
6	64	Explicit equation:
7	128	
8	256	Recursive equation:
9	512	
10	1,024	

b.

x	$f(x)$	Type of function and nature of change:
6	36	Explicit equation:
7	49	
8	64	Recursive equation:
9	81	
10	100	



NAME _____

DATE _____

PERIOD _____

c.

x	$f(x)$
6	11
7	13
8	15
9	17
10	19

Type of function and nature of change:

Explicit equation:

Recursive equation:

10. a.

x	$f(x)$
-2	-17
-1	-12
0	-7
1	-2
2	3

Type of function and nature of change:

Explicit equation:

Recursive equation:

b.

x	$f(x)$
-2	$\frac{1}{25}$
-1	$\frac{1}{5}$
0	1
1	5
2	25

Type of function and nature of change:

Explicit equation:

Recursive equation:



NAME _____

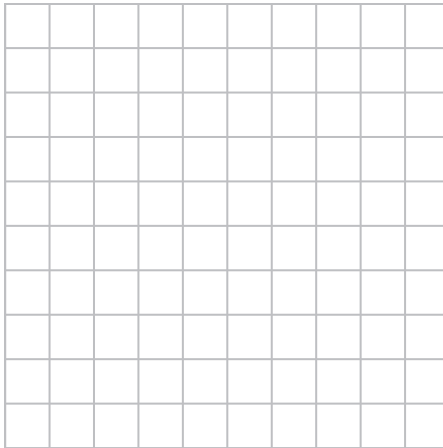
DATE _____

PERIOD _____

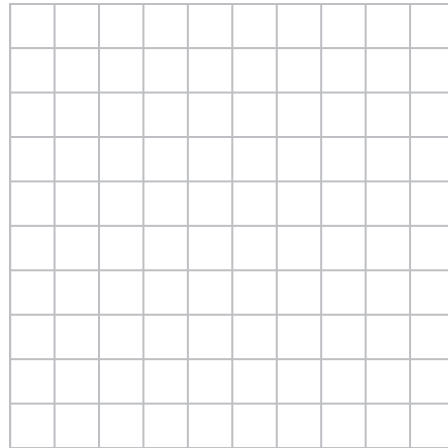
c.	x	$f(x)$	Type of function and nature of change:
	-2	9	Explicit equation:
	-1	6	
	0	5	Recursive equation:
	1	6	
	2	9	

- 11.** Graph the functions from the tables in problems 9 and 10. Add any additional characteristics you notice from the graph. Place the axes so that you can show all 5 points. Identify your scale. Write the explicit equation above the graph.

a. Equation:



b. Equation:

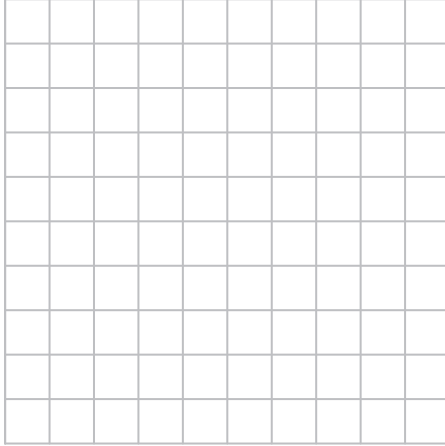
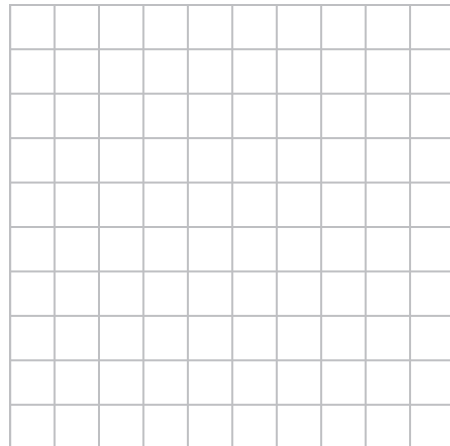




NAME

DATE

PERIOD

c. Equation:**d.** Equation:**e.** Equation:**f.** Equation:

Find the greatest common factor (GCF) for the given values.

12. 15 and 25**13.** 12 and 32



NAME

DATE

PERIOD

14. 18 and 54

15. 14 and 21

16. 6, 18, and -12

17. 45 and 36

18. 22, 33, and 99

19. 16, 24, and 36

20. 25 and 36