



Name _____

Date _____

1. Use pattern N to complete parts (a) and (b).

Pattern N	0	$\frac{1}{2}$	1		2	
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- a. Write the rule for pattern N.

- b. Complete the table.

2. Use the table to complete parts (a)–(c).

- a. The rule for pattern Y is add 4. The rule for pattern Z is subtract $\frac{1}{2}$. Complete the table.

Pattern Y	Pattern Z
0	4
4	$3\frac{1}{2}$
8	3

- b. What is the number in pattern Z when the number in pattern Y is 24?

- c. What is the number in pattern Y when the number in pattern Z is 0?

3. Use the table of ordered pairs to complete parts (a)–(e).

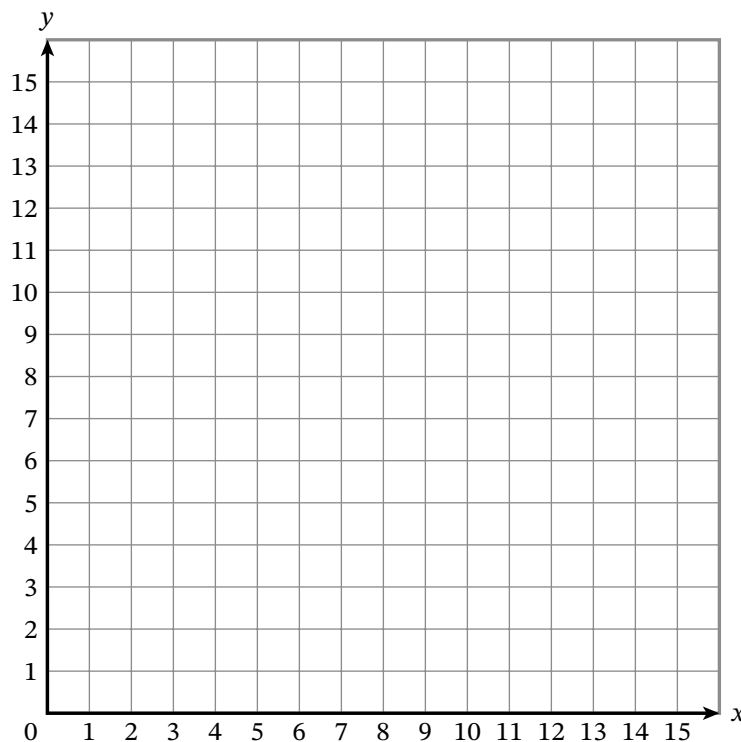
a. Write the rule for pattern A.

b. Write the rule for pattern B.

c. Use the numbers from pattern A and pattern B to create ordered pairs and complete the table.

d. Plot the ordered pairs from the table in the coordinate plane.

Pattern A x	Pattern B y	Ordered Pair (x, y)
0	4	
3	5	
6	6	
9	7	



e. Describe the movement needed to get from point $(6, 6)$ to $(9, 7)$.

4. Use the table to complete parts (a)–(c).

Pattern P x	Pattern Q y	Ordered Pair (x, y)
2	0	$(2, 0)$
$3\frac{1}{2}$	3	$(3\frac{1}{2}, 3)$
5	6	$(5, 6)$
$6\frac{1}{2}$	9	$(6\frac{1}{2}, 9)$

- a. Every time a number in pattern P increases by $1\frac{1}{2}$, what happens to the numbers in pattern Q?
- b. If patterns P and Q continue, what will be the next ordered pair on the table?
- c. If patterns P and Q continue, would the ordered pair $(11, 18)$ be part of the pattern? How do you know?