Patterns and Equations

Write a rule and an equation for the pattern in the table.

x	1	4	7	8	9
y	3	12	21	24	27

Think: How can I get to the value of *y* if I start at the value of *x*?
Think: 3 is 1 × 3   12 is 4 × 3
State a theory: It seems that 3 × *x* is equal to *y*.
Test the other pairs: 7 × 3 = 21 ✔   8 × 3 = 24 ✔   9 × 3 = 27 ✔
Write a rule: The value of *y* is the value of *x* times 3.
Write an equation: $y = x \times 3$, or $y = 3x$

Write a rule and an equation for the pattern in each table.

1.

x	3	6	11	13	15
y	5	8	13	15	17

2.

x	2	5	6	8	9
y	6	15	18	24	27

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3.

x	4	12	20	36	40
y	1	3	5	9	10

4.

x	5	7	9	10	12
y	0	2	4	5	7

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5. Write a Problem Complete the table to show a pattern. Then write a rule and an equation for the pattern.

_____

x					
y					

_____

6. Writing to Explain Explain how you would find the pattern in this table, and how you would write a rule and an equation for the pattern.

x	4	5	7	10	12
y	0	1	3	6	8

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