Name _____

Patterns in Algebra

You can find the relationship between two variables by using a table to find the pattern.

1. The numbers in the table below form a pattern. Each value for x has a related value for y. When $x = 1$, then $y = 5$, and when $x = 2$, then $y = 6$. The rule for finding y shows how these variables are related. The rule $y = x + 4$ means that whatever value x has, the value of y is 4 more. Use the rule to complete the table.

x	1	2	3	10	20	100
y	5	6	7			

Use the rule to complete each table.

2. The rule is $y = x - 3$.

x	5	6	7	10	20
y					

3. The rule is $y = 2x$.

x	0	1	2	4	7	10
y						

Study each table. Find the rule and complete each table.

4.

x	5	10	12	20	50
y	0	5	7		

rule: $y =$ _____

5.

x	0	2	5	20	50
y	1	3	6		

rule: $y =$ _____

6.

x	2	5	10	25	100
y	6	15	30		

rule: $y =$ _____

7.

x	0	3	6	10	15
y	3	6	9		

rule: $y =$ _____

Name _____

Patterns in Algebra

You can find the relationship between two variables by using a table to find the pattern.

1. The numbers in the table below form a pattern. Each value for *x* has a related value for *y*. When $x = 1$, then $y = 5$, and when $x = 2$, then $y = 6$. The rule for finding *y* shows how these variables are related. The rule $y = x + 4$ means that whatever value *x* has, the value of *y* is 4 more. Use the rule to complete the table.

x	1	2	3	10	20	100
y	5	6	7	**14**	**24**	**104**

Use the rule to complete each table.

2. The rule is $y = x - 3$.

x	5	6	7	10	20
y	**2**	**3**	**4**	**7**	**17**

3. The rule is $y = 2x$.

x	0	1	2	4	7	10
y	**0**	**2**	**4**	**8**	**14**	**20**

Study each table. Find the rule and complete each table.

4.

x	5	10	12	20	50
y	0	5	7	**15**	**45**

rule: $y =$ ___ **$x - 5$** ___

5.

x	0	2	5	20	50
y	1	3	6	**21**	**51**

rule: $y =$ ___ **$x + 1$** ___

6.

x	2	5	10	25	100
y	6	15	30	**75**	**300**

rule: $y =$ ___ **$3x$** ___

7.

x	0	3	6	10	15
y	3	6	9	**13**	**18**

rule: $y =$ ___ **$x + 3$** ___