Lesson 2.5T ~ Recursive Routines to Equations

Name_____ Period_____ Date_____

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┌─────────────────────────────────────────────────────────────┐
│  WRITING EQUATIONS FROM RECURSIVE ROUTINES                    │
│                                                               │
│              y = _____ ± _____                          │
│         ┌─────────────┐               ┌────────────────┐      │
│         │ Start Value │               │ Rate of Change │      │
│         └─────────────┘               └────────────────┘      │
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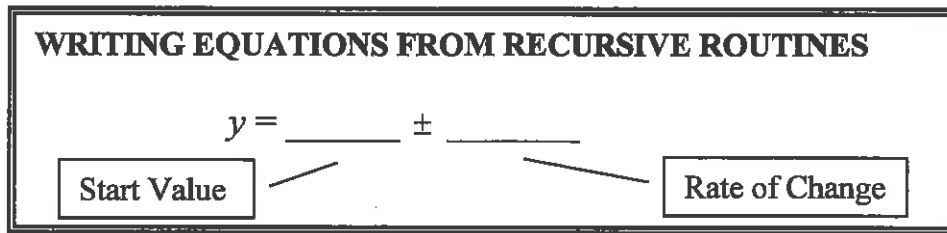
Match each recursive rule with its slope-intercept equation.

_____ 1. Start Value: 5   Rate of Change: 7   **A.** $y = -5 + x$

_____ 2. Start Value: −8   Rate of Change: $-\frac{1}{3}$ **B.** $y = -8 + \frac{1}{3}x$

_____ 3. Start Value: 7   Rate of Change: 5   **C.** $y = 2x$

_____ 4. Start Value: −8   Rate of Change: $\frac{1}{3}$ **D.** $y = 3 - 2x$

_____ 5. Start Value: 3   Rate of Change: −2   **E.** $y = 7 + 5x$

_____ 6. Start Value: 3   Rate of Change: 0   **F.** $y = -3 + 2x$

_____ 7. Start Value: −3   Rate of Change: 2   **G.** $y = 3$

_____ 8. Start Value: 0   Rate of Change: 2   **H.** $y = 5 + 7x$

_____ 9. Start Value: −5   Rate of Change: 1   **I.** $y = -8 - \frac{1}{3}x$

_____ 10. Start Value: −2   Rate of Change: 6   **J.** $y = 9 + 1.5x$

_____ 11. Start Value: 9   Rate of Change: 1.5   **K.** $y = -2 + 6x$

Determine the rate of change and the start value for each table. Write an equation in slope-intercept form.

12.

0	6
1	9
2	12
3	15
4	18

Rate of Change: _____

Start Value: _____

Equation: _____

13.

0	17
1	12
2	7
3	2
4	−3

Rate of Change: _____

Start Value: _____

Equation: _____

14.

0	0
3	12
4	16
7	28
8	32

Rate of Change: _____

Start Value: _____

Equation: _____

15.

−2	0
0	20
2	40
4	60
6	80

Rate of Change: _____

Start Value: _____

Equation: _____

16.

−2	10
1	13
3	15
4	16
10	22

Rate of Change: _____

Start Value: _____

Equation: _____

17.

3	2.5
4	3
5	3.5
6	4
7	4.5

Rate of Change: _____

Start Value: _____

Equation: _____