Name : _____

General Sequence

Write the sequence using recursive formula.

1) $a_n = a_{n-1} + \sqrt{5}\ ;\ a_1 = \sqrt{5}$

2) $a_n = a_{n-1} \cdot 3\ ;\ a_1 = -1.7$

3) $a_n = a_{n-1} + 2.3\ ;$

1) $;\ a_1 = 6$

5) $a_n = -\frac{1}{4} \cdot a_{n-1}$

$= 9$

7) $a_n = a_{n-1} \cdot (n^3 +$

$a_1 = 4$

9) $a_n = (2^n - 2) \cdot a_{n-1}\ ;\ a_1 = 3$

10) $a_n = \frac{3^n}{5} + a_{n-1}\ ;\ a_1 = \frac{1}{3}$

Name : _____

Answer key

General Sequence

Sheet 1

Write the sequence using recursive formula.

1) $a_n = a_{n-1} + \sqrt{5}\ ;\ a_1 = \sqrt{5}$

$\sqrt{5}, 2\sqrt{5}, 3\sqrt{5}, 4\sqrt{5}, \ldots$

2) $a_n = a_{n-1} \cdot 3\ ;\ a_1 = -1.7$

$-1.7, -5.1, -15.3, -45.9, \ldots$

3) $a_n = a_{n-1} + 2.3\ ;$ 1) ; $a_1 = 6$

10, 12.3

144, 2160, ...

5) $a_n = -\frac{1}{4} \cdot a_{n-1}$; $= 9$

12, –3

441, 3087, ...

7) $a_n = a_{n-1} \cdot (n^3 +$ $a_1 = 4$

2, 18, 504, 32760, ...

4, 12, 30, 62, ...

9) $a_n = (2^n - 2) \cdot a_{n-1}\ ;\ a_1 = 3$

3, 6, 36, 504, ...

10) $a_n = \frac{3^n}{5} + a_{n-1}\ ;\ a_1 = \frac{1}{3}$

$\frac{1}{3}, \frac{32}{15}, \frac{113}{15}, \frac{356}{15}, \ldots$