

Name : _____

Recursive Formula

Part A

Write the geometric sequence using recursive formula.

1) $a_n = a_{n-1} \cdot \frac{1}{4} ; a_1 = 2$

2) $a_n = a_{n-1} \cdot 4 ; a_1 = 0.4$

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

4) $a_n = a_{n-1} \cdot 11 ; a_1 = -4$

5) $a_n = a_{n-1} \cdot -6 ; a_1 = -21$

6) $a_n = a_{n-1} \cdot -5 ; a_1 = 13$

Part B

Write the recursive formula of each geometric sequence.

7) 10, -9, 8.1, -7.29, 6.561, ...

8) 5, 15, -45, 135, -405, ...

9) $\sqrt{7}, \frac{\sqrt{7}}{3}, \frac{\sqrt{7}}{9}, \frac{\sqrt{7}}{27}, \frac{\sqrt{7}}{81}, \dots$

10) -35, -140, -560, -2240, -8960, ...

Recursive FormulaPart A

Write the geometric sequence using recursive formula.

1) $a_n = a_{n-1} \cdot \frac{1}{4} ; a_1 = 2$

 $2, \frac{1}{2}, \frac{1}{8}, \frac{1}{32}, \dots$

2) $a_n = a_{n-1} \cdot 4 ; a_1 = 0.4$

 $0.4, 1.6, 6.4, 25.6, \dots$

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

 $3, 6, 12, 24, \dots$

4) $a_n = a_{n-1} \cdot 11 ; a_1 = -4$

 $-4, -44, -484, -5324, \dots$

5) $a_n = a_{n-1} \cdot -6 ; a_1 = -21$

 $-21, 126, -756, 4536, \dots$

6) $a_n = a_{n-1} \cdot -5 ; a_1 = 13$

 $13, -65, 325, -1625, \dots$ Part B

Write the recursive formula of each geometric sequence.

7) 10, -9, 8.1, -7.29, 6.561, ...

 $a_n = a_{n-1} \cdot -0.9$

8) 5, 15, -45, 135, -405, ...

 $a_n = a_{n-1} \cdot -3$

9) $\sqrt{7}, \frac{\sqrt{7}}{3}, \frac{\sqrt{7}}{9}, \frac{\sqrt{7}}{27}, \frac{\sqrt{7}}{81}, \dots$

 $a_n = a_{n-1} \cdot \frac{1}{3}$

10) -35, -140, -560, -2240, -8960, ...

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