Algebra I Practice F.LE.A.2: Sequences

NAME:_____

1. Write a formula for the general term of the infinite sequence: $\dfrac{1}{5}$, $-\dfrac{1}{10}$, $\dfrac{1}{15}$, $-\dfrac{1}{20}$, ...

[A] $t_n = \dfrac{(-2)^{n+1}}{5(n+1)}$ [B] $t_n = \dfrac{(-1)^{n+2}}{7n}$

[C] $t_n = \dfrac{(-1)^{n+2}}{5n}$ [D] $t_n = \dfrac{(-1)^{n+1}}{5n}$

2. Write a formula for the general term of the infinite sequence: $-\dfrac{1}{3}$, $\dfrac{1}{6}$, $-\dfrac{1}{9}$, $\dfrac{1}{12}$, ...

[A] $t_n = \dfrac{(-1)^{n}}{3n}$ [B] $t_n = \dfrac{(-2)^{n}}{3(n+1)}$

[C] $t_n = \dfrac{(-1)^{n+2}}{3n}$ [D] $t_n = \dfrac{(-1)^{n+2}}{n}$

3. Write a formula for the general term of the infinite sequence: $\dfrac{1}{6}$, $-\dfrac{1}{12}$, $\dfrac{1}{18}$, $-\dfrac{1}{24}$, ...

[A] $t_n = \dfrac{(-1)^{n+1}}{6n}$ [B] $t_n = \dfrac{(-1)^{n+2}}{4n}$

[C] $t_n = \dfrac{(-1)^{n+2}}{6n}$ [D] $t_n = \dfrac{(-2)^{n+1}}{6(n+1)}$

4. Write a formula for the general term of the infinite sequence: $-\dfrac{1}{4}$, $\dfrac{1}{8}$, $-\dfrac{1}{12}$, $\dfrac{1}{16}$, ...

[A] $t_n = \dfrac{(-1)^{n+2}}{4n}$ [B] $t_n = \dfrac{(-1)^{n}}{4n}$

[C] $t_n = \dfrac{(-2)^{n}}{4(n+1)}$ [D] $t_n = \dfrac{(-1)^{n+2}}{6n}$

5. Write a formula for the general term of the infinite sequence: $\dfrac{1}{2}$, $-\dfrac{1}{4}$, $\dfrac{1}{6}$, $-\dfrac{1}{8}$, ...

[A] $t_n = \dfrac{(-2)^{n+1}}{2(n+1)}$ [B] $t_n = \dfrac{(-1)^{n+2}}{4n}$

[C] $t_n = \dfrac{(-1)^{n+2}}{2n}$ [D] $t_n = \dfrac{(-1)^{n+1}}{2n}$

6. Write a formula for the general term of the infinite sequence: $-\dfrac{1}{5}$, $\dfrac{1}{10}$, $-\dfrac{1}{15}$, $\dfrac{1}{20}$, ...

[A] $t_n = \dfrac{(-1)^{n+2}}{5n}$ [B] $t_n = \dfrac{(-1)^{n+2}}{3n}$

[C] $t_n = \dfrac{(-1)^{n}}{5n}$ [D] $t_n = \dfrac{(-2)^{n}}{5(n+1)}$

7. Write a formula for the general term of the infinite sequence: $\dfrac{1}{3}$, $-\dfrac{1}{6}$, $\dfrac{1}{9}$, $-\dfrac{1}{12}$, ...

[A] $t_n = \dfrac{(-1)^{n+1}}{3n}$ [B] $t_n = \dfrac{(-1)^{n+2}}{n}$

[C] $t_n = \dfrac{(-1)^{n+2}}{3n}$ [D] $t_n = \dfrac{(-2)^{n+1}}{3(n+1)}$

8. Write a formula for the general term of the infinite sequence: $-\dfrac{1}{6}$, $\dfrac{1}{12}$, $-\dfrac{1}{18}$, $\dfrac{1}{24}$, ...

[A] $t_n = \dfrac{(-1)^{n+2}}{8n}$ [B] $t_n = \dfrac{(-2)^{n}}{6(n+1)}$

[C] $t_n = \dfrac{(-1)^{n+2}}{6n}$ [D] $t_n = \dfrac{(-1)^{n}}{6n}$

[1] D

[2] A

[3] A

[4] B

[5] D

[6] C

[7] A

[8] D