Solutions – Geometric Sequences (A)

The *n*th term of a sequence is $4\left(\frac{1}{2}\right)^{n-1}$. Find the 7th term.

$\frac{1}{16}$

Find the *n*th term of the sequence 4, $\frac{4}{3}$, $\frac{4}{9}$, $\frac{4}{27}$, ...

$4\left(\frac{1}{3}\right)^{n-1}$

Find the *n*th term of the sequence 4, 8, 16, 32, ...

$4 \times 2^{n-1}$

Find the next two terms of the sequence 3, 6, 12, 24, ...

48, 96

Solutions – Geometric Sequences (B)

Find the nth term of the sequence 6, 3, $\frac{3}{2}$, $\frac{3}{4}$, ...

$6\left(\frac{1}{2}\right)^{n-1}$

The nth term of a sequence is $4\left(\frac{1}{2}\right)^{n-1}$. Find the 9th term.

$\frac{1}{64}$

Find the next two terms of the sequence 2, 4, 8, 16, ...

32, 64

Find the nth term of the sequence 7, -21, 63, -189, ...

$7 \times (-3)^{n-1}$

Solutions – Geometric Sequences (C)

The nth term of a sequence is $6\left(\frac{1}{3}\right)^{n-1}$. Find the 6th term.

$\dfrac{2}{81}$

Find the next two terms of the sequence 2, 4, 8, 16, ...

32, 64

Find the nth term of the sequence 8, $\dfrac{16}{3}$, $\dfrac{32}{9}$, $\dfrac{64}{27}$, ...

$8\left(\frac{2}{3}\right)^{n-1}$

Find the nth term of the sequence 3, 6, 12, 24, ...

$3 \times 2^{n-1}$

Solutions – Geometric Sequences (D)

The nth term of a sequence is $4\left(\frac{1}{2}\right)^{n-1}$. Find the 7th term.

$\dfrac{1}{16}$

Find the nth term of the sequence 3, 12, 48, 192, ...

$3 \times 4^{n-1}$

Find the next two terms of the sequence 3, 6, 12, 24, ...

48, 96

Find the nth term of the sequence 6, 2, $\dfrac{2}{3}$, $\dfrac{2}{9}$, ...

$6\left(\frac{1}{3}\right)^{n-1}$

Solutions – Geometric Sequences (E)

Find the *n*th term of the sequence 4, 2, 1, $\frac{1}{2}$, ...

$4\left(\frac{1}{2}\right)^{n-1}$

The *n*th term of a sequence is $4\left(\frac{1}{2}\right)^{n-1}$. Find the 7th term.

$\frac{1}{16}$

Find the *n*th term of the sequence 4, 12, 36, 108, ...

$4 \times 3^{n-1}$

Find the next two terms of the sequence 2, −4, 8, −16, ...

32, −64

Solutions – Geometric Sequences (F)

Find the *n*th term of the sequence 4, 16, 64, 256, ...

$4 \times 4^{n-1}$

The *n*th term of a sequence is $3\left(\frac{1}{2}\right)^{n-1}$. Find the 7th term.

$\dfrac{3}{64}$

Find the *n*th term of the sequence 4, $\dfrac{4}{3}$, $\dfrac{4}{9}$, $\dfrac{4}{27}$, ...

$4\left(\frac{1}{3}\right)^{n-1}$

Find the next two terms of the sequence 2, 4, 8, 16, ...

32, 64

Solutions – Geometric Sequences (G)

Find the next two terms of the sequence 2, 4, 8, 16, ...

32, 64

The nth term of a sequence is $5\left(\frac{1}{2}\right)^{n-1}$. Find the 7th term.

$\frac{5}{64}$

Find the nth term of the sequence 8, 24, 72, 216, ...

$8 \times 3^{n-1}$

Find the nth term of the sequence 7, $\frac{21}{2}$, $\frac{63}{4}$, $\frac{189}{8}$, ...

$7\left(\frac{3}{2}\right)^{n-1}$

Solutions – Geometric Sequences (H)

Find the *n*th term of the sequence 7, −14, 28, −56, ...

$7 \times (-2)^{n-1}$

Find the *n*th term of the sequence 5, $\frac{5}{2}$, $\frac{5}{4}$, $\frac{5}{8}$, ...

$5 \left(\frac{1}{2}\right)^{n-1}$

Find the next two terms of the sequence 2, 4, 8, 16, ...

32, 64

The *n*th term of a sequence is $2 \left(\frac{1}{2}\right)^{n-1}$. Find the 6th term.

$\frac{1}{16}$

Solutions – Geometric Sequences (I)

Find the *n*th term of the sequence 7, −14, 28, −56, ...

$7 \times (-2)^{n-1}$

Find the next two terms of the sequence 2, 4, 8, 16, ...

32, 64

Find the *n*th term of the sequence 2, $\frac{4}{3}$, $\frac{8}{9}$, $\frac{16}{27}$, ...

$2\left(\frac{2}{3}\right)^{n-1}$

The *n*th term of a sequence is $6\left(\frac{1}{2}\right)^{n-1}$. Find the 8th term.

$\frac{3}{64}$

Solutions – Geometric Sequences (J)

Find the next two terms of the sequence 2, 4, 8, 16, ...

32, 64

Find the nth term of the sequence 3, 2, $\frac{4}{3}$, $\frac{8}{9}$, ...

$3\left(\frac{2}{3}\right)^{n-1}$

The nth term of a sequence is $5\left(\frac{1}{2}\right)^{n-1}$. Find the 7th term.

$\frac{5}{64}$

Find the nth term of the sequence 3, 12, 48, 192, ...

$3 \times 4^{n-1}$