Solutions – Geometric Series (A)

−5, 20, −80, 320, ... Find the sum of the first 9 terms.

$S_9 = -262145$

5.0, −1.0, 0.2, −0.04, ... Find the sum to infinity.

$S_\infty = 25/6$

−3, 6, −12, 24, ... Find the sum of the first 10 terms.

$S_{10} = 1023$

5.0, −1.25, 0.3125, −0.07812, ... Find the sum to infinity.

$S_\infty = 4$

9, −36, 144, −576, ... Find the sum of the first 10 terms.

$S_{10} = -1887435$

7.0, 0.7, 0.07, 0.007, ... Find the sum to infinity.

$S_\infty = 70/9$

Solutions – Geometric Series (B)

1, −2, 4, −8, ... Find the sum of the first 9 terms.

$S_9 = 171$

6, −24, 96, −384, ... Find the sum of the first 9 terms.

$S_9 = 314574$

3, −6, 12, −24, ... Find the sum of the first 7 terms.

$S_7 = 129$

10.0, 2.0, 0.4, 0.08, ... Find the sum to infinity.

$S_\infty = 25/2$

3.0, 0.6, 0.12, 0.024, ... Find the sum to infinity.

$S_\infty = 15/4$

4.0, 0.8, 0.16, 0.032, ... Find the sum to infinity.

$S_\infty = 5$

Solutions – Geometric Series (C)

3, −12, 48, −192, ... Find the sum of the first 7 terms.

$S_7 = 9831$

−10, 40, −160, 640, ... Find the sum of the first 8 terms.

$S_8 = 131070$

−6, 24, −96, 384, ... Find the sum of the first 11 terms.

$S_{11} = -5033166$

7.0, 1.75, 0.4375, 0.10938, ... Find the sum to infinity.

$S_\infty = 28/3$

9.0, −0.9, 0.09, −0.009, ... Find the sum to infinity.

$S_\infty = 90/11$

2.0, −0.5, 0.125, −0.03125, ... Find the sum to infinity.

$S_\infty = 8/5$

Solutions – Geometric Series (D)

2.0, 0.6, 0.18, 0.054, ... Find the sum to infinity.

$S_\infty = 20/7$

4.0, 0.8, 0.16, 0.032, ... Find the sum to infinity.

$S_\infty = 5$

7, 14, 28, 56, ... Find the sum of the first 8 terms.

$S_8 = 1785$

3.0, 0.9, 0.27, 0.081, ... Find the sum to infinity.

$S_\infty = 30/7$

6, 12, 24, 48, ... Find the sum of the first 11 terms.

$S_{11} = 12282$

8, −32, 128, −512, ... Find the sum of the first 10 terms.

$S_{10} = -1677720$

Solutions – Geometric Series (E)

8.0, 2.4, 0.72, 0.216, ... Find the sum to infinity.

$S_\infty = 80/7$

−6, −12, −24, −48, ... Find the sum of the first 6 terms.

$S_6 = -378$

7.0, 1.75, 0.4375, 0.10938, ... Find the sum to infinity.

$S_\infty = 28/3$

6.0, −1.5, 0.375, −0.09375, ... Find the sum to infinity.

$S_\infty = 24/5$

−9, −18, −36, −72, ... Find the sum of the first 6 terms.

$S_6 = -567$

8, −24, 72, −216, ... Find the sum of the first 9 terms.

$S_9 = 39368$

Solutions – Geometric Series (F)

−4, −8, −16, −32, ... Find the sum of the first 7 terms.

$S_7 = -508$

6.0, −1.5, 0.375, −0.09375, ... Find the sum to infinity.

$S_\infty = 24/5$

−9, −36, −144, −576, ... Find the sum of the first 11 terms.

$S_{11} = -12582909$

−1, −3, −9, −27, ... Find the sum of the first 11 terms.

$S_{11} = -88573$

10.0, −2.0, 0.4, −0.08, ... Find the sum to infinity.

$S_\infty = 25/3$

7.0, 1.4, 0.28, 0.056, ... Find the sum to infinity.

$S_\infty = 35/4$

Solutions – Geometric Series (G)

−4, 16, −64, 256, ... Find the sum of the first 12 terms.
$S_{12} = 13421772$

2.0, −0.5, 0.125, −0.03125, ... Find the sum to infinity.
$S_\infty = 8/5$

8.0, 1.6, 0.32, 0.064, ... Find the sum to infinity.
$S_\infty = 10$

7, −21, 63, −189, ... Find the sum of the first 7 terms.
$S_7 = 3829$

9, 27, 81, 243, ... Find the sum of the first 12 terms.
$S_{12} = 2391480$

7.0, 1.4, 0.28, 0.056, ... Find the sum to infinity.
$S_\infty = 35/4$

Solutions – Geometric Series (H)

10.0, 3.0, 0.9, 0.27, ... Find the sum to infinity.

$S_\infty = 100/7$

1.0, 0.1, 0.01, 0.001, ... Find the sum to infinity.

$S_\infty = 10/9$

10, −40, 160, −640, ... Find the sum of the first 6 terms.

$S_6 = -8190$

1.0, 0.3, 0.09, 0.027, ... Find the sum to infinity.

$S_\infty = 10/7$

1, −3, 9, −27, ... Find the sum of the first 9 terms.

$S_9 = 4921$

5, 10, 20, 40, ... Find the sum of the first 7 terms.

$S_7 = 635$

Solutions – Geometric Series (I)

9.0, 1.8, 0.36, 0.072, ... Find the sum to infinity.

$S_\infty = 45/4$

−9, −27, −81, −243, ... Find the sum of the first 10 terms.

$S_{10} = -265716$

1.0, 0.2, 0.04, 0.008, ... Find the sum to infinity.

$S_\infty = 5/4$

3.0, −0.6, 0.12, −0.024, ... Find the sum to infinity.

$S_\infty = 5/2$

1, −2, 4, −8, ... Find the sum of the first 10 terms.

$S_{10} = -341$

−10, 40, −160, 640, ... Find the sum of the first 9 terms.

$S_9 = -524290$

Solutions – Geometric Series (J)

4.0, 1.2, 0.36, 0.108, ... Find the sum to infinity.

$S_\infty = 40/7$

−6, 12, −24, 48, ... Find the sum of the first 11 terms.

$S_{11} = -4098$

5.0, −0.5, 0.05, −0.005, ... Find the sum to infinity.

$S_\infty = 50/11$

−2, 8, −32, 128, ... Find the sum of the first 7 terms.

$S_7 = -6554$

3, −9, 27, −81, ... Find the sum of the first 10 terms.

$S_{10} = -44286$

7.0, −1.4, 0.28, −0.056, ... Find the sum to infinity.

$S_\infty = 35/6$