Task card 1 Sigma Notation & Infinite Geometri...

Evaluate the sum of 3k - 2 for k = 3 to 6.

$$\sum_{k=3}^{6} (3k - 2)$$

Task card 2 Sigma Notation & Infinite Geometri...

Evaluate the sum of k^2 - 5 for k = 1 to 3.

$$\sum_{k=1}^{3} (k^2 - 5)$$

Task card 3 Sigma Notation & Infinite Geometri...

What is the common ratio of the geometric series 2 - 2 + 2 - ...?

Task card 4 Sigma Notation & Infinite Geometri...

Does the infinite geometric series 9 + 6 + 4 + ... converge or diverge?

Task card 5 Sigma Notation & Infinite Geometri...

Evaluate the sum of k - 1 for k = 4 to 8.

$$\sum_{k=4}^{8} (k - 1)$$

Task card 6 Sigma Notation & Infinite Geometri...

How many terms are added in the sum of 4k + 1 for k = 1 to 15?

$$\sum_{k=1}^{15} (4k + 1)$$

Task card 7 Sigma Notation & Infinite Geometri...

Evaluate the sum of 2k - 3 for k = 4 to 7.

$$\sum_{k=4}^{7} (2k - 3)$$

Task card 8 Sigma Notation & Infinite Geometri...

Evaluate the sum of k^2 + 3 for k = 1 to 3.

$$\sum_{k=1}^{3} (k^2 + 3)$$

Task card 9 Sigma Notation & Infinite Geometri...

Evaluate the sum of 3k - 1 for k = 0 to 4.

$$\sum_{k=0}^{4} (3k - 1)$$

Task card 10 Sigma Notation & Infinite Geometri...

What is the common ratio of the geometric series 12 + 30 + 75 + ...?

Task card 11 Sigma Notation & Infinite Geometri...

Does the infinite geometric series 100 + 40 + 16 + ... converge or diverge?

Task card 12 Sigma Notation & Infinite Geometri...

Evaluate the sum of 3k + 4 for k = 0 to 4.

$$\sum_{k=0}^{4} (3k + 4)$$

Task card 13 Sigma Notation & Infinite Geometri...

How many terms are added in the sum of $3k + 4$ for $k = 1$ to 23?

$$\sum_{k=1}^{23} (3k + 4)$$

Task card 14 Sigma Notation & Infinite Geometri...

Evaluate the sum of $2k + 4$ for $k = 4$ to 7.

$$\sum_{k=4}^{7} (2k + 4)$$

Task card 15 Sigma Notation & Infinite Geometri...

Evaluate the sum of $k^2 - 2$ for $k = 1$ to 3.

$$\sum_{k=1}^{3} (k^2 - 2)$$

Task card 16 Sigma Notation & Infinite Geometri...

Evaluate the sum of $k^2 - 3k - 1$ for $k = 3$ to 6.

$$\sum_{k=3}^{6} (k^2 - 3k - 1)$$

Task card 17 Sigma Notation & Infinite Geometri...

Does the infinite geometric series $27 + 9 + 3 + \ldots$ converge or diverge?

Task card 18 Sigma Notation & Infinite Geometri...

Find the sum of the infinite geometric series $11 \cdot (\frac{3}{4})^{k-1}$ for $k = 1$ to ∞.

$$\sum_{k=1}^{\infty} 11 \cdot (\frac{3}{4})_{k-1}$$

Task card 19 Sigma Notation & Infinite Geometri...

Evaluate the sum of 5k - 6 for k = 4 to 8.

$$\sum_{k=4}^{8} (5k - 6)$$

Task card 20 Sigma Notation & Infinite Geometri...

Write the repeating decimal 0.777... as a fraction. (It is the infinite geometric series $\frac{7}{10} + \frac{7}{100} + \frac{7}{1000} + \ldots$)

Task card 21 Sigma Notation & Infinite Geometri...

What is the common ratio of the geometric series 64 - 16 + 4 - ...?

Task card 22 Sigma Notation & Infinite Geometri...

Evaluate the sum of $3 \cdot 3^k$ for k = 0 to 5.

$$\sum_{k=0}^{5} 3 \cdot 3^k$$

Task card 23 Sigma Notation & Infinite Geometri...

Evaluate the sum of $k^2 - k - 3$ for k = 0 to 3.

$$\sum_{k=0}^{3} (k^2 - k - 3)$$

Task card 24 Sigma Notation & Infinite Geometri...

Evaluate the sum of 2k + 5 for k = 2 to 6.

$$\sum_{k=2}^{6} (2k + 5)$$

Sigma Notation & Infinite Geometric Series Task Cards

Recording sheet · Grade 12 · Answer each question. Write fractions in simplest form. For converge-or-diverge questions write converges or diverges.

Scan to check your answers

Name: _____ Date: _____

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

Sigma Notation & Infinite Geometric Series Task Cards: Answer Key

Grade 12 · Easy

The answers online

1. 46	**2.** -1	**3.** -1
4. converges	**5.** 25	**6.** 15
7. 32	**8.** 23	**9.** 25
10. $\frac{5}{2}$	**11.** converges	**12.** 50
13. 23	**14.** 60	**15.** 8
16. 28	**17.** converges	**18.** 44
19. 120	**20.** $\frac{7}{9}$	**21.** $-\frac{1}{4}$
22. 1092	**23.** -4	**24.** 65