

Name _____

Use Special Sum Formulas to find the sum.

1) $\sum_{i=1}^{39} (4i - 5)$

1) _____

Objective: (5.1) Use Special Sum Formulas to Find Sum

2) $\sum_{k=1}^{24} (8k^3 - 12k^2)$

2) _____

Objective: (5.1) Use Special Sum Formulas to Find Sum

Write out the sum.

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

Objective: (12.1) Use Summation Notation

3) _____

4) $\sum_{k=1}^n (3k + 8)$

Objective: (12.1) Use Summation Notation

4) _____

5) $\sum_{k=1}^n 8k+1$

Objective: (12.1) Use Summation Notation

5) _____

Express the sum using summation notation.

6) $3^5 + 4^5 + 5^5 + \dots + 10^5$

Objective: (12.1) Use Summation Notation

6) _____

7) $7 + \frac{7^2}{2} + \frac{7^3}{3} + \dots + \frac{7^n}{n}$

Objective: (12.1) Use Summation Notation

7) _____

Find the sum of the sequence.

8)
$$\sum_{k=1}^{11} 6$$

Objective: (12.1) Find the Sum of a Sequence

8) _____

9)

$$\sum_{k=3}^6 9k$$

Objective: (12.1) Find the Sum of a Sequence

9) _____

10)

$$\sum_{k=1}^5 (k - 9)$$

Objective: (12.1) Find the Sum of a Sequence

10) _____

11)

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

Objective: (12.1) Find the Sum of a Sequence

11) _____

Find the value of the specified finite sum.

12) Given $\sum_{k=1}^n a_k = -6$ and $\sum_{k=1}^n b_k = 1$, find $\sum_{k=1}^n (a_k - b_k)$.

12) _____

Objective: (5.2) Find Value Using Algebraic Rules

13) Given $\sum_{k=1}^n a_k = 5$ and $\sum_{k=1}^n b_k = 6$, find $\sum_{k=1}^n (a_k - 2b_k)$.

13) _____

Objective: (5.2) Find Value Using Algebraic Rules

Answer Key

Testname: MATH2_CH12_HW_10

1) 2925

2) 661,200

3) $4 + 5 + 6 + \dots + (n + 3)$

4) $11 + 14 + 17 + \dots + (3n + 8)$

5) $8^2 + 8^3 + 8^4 + \dots + 8^{n+1}$

6)

$$\sum_{k=3}^{10} k^5$$

7) $\sum_{k=1}^n \frac{7^k}{k}$

8) 66

9) 162

10) -30

11) 22

12) -7

13) -7