

NAME: _____

P.I. A2.A.34: Represent the sum of a series, using sigma notation

- Which expression defines the series $9 + 17 + 25 + 33 + 41 + 49$?
 [A] $\sum_{n=1}^6 (8n + 1)$ [B] $\sum_{n=2}^6 (8n - 7)$
 [C] $\sum_{n=1}^6 (n + 8)$ [D] $\sum_{n=0}^6 (8n + 1)$
- Given $24 + 27 + 30 + 33 + \dots$, write the first 17 terms of this series in summation notation.
 [A] $\sum_{j=1}^{16} 3j + 24$ [B] $\sum_{j=0}^{16} 3j + 24$
 [C] $\sum_{j=0}^{17} 24(3)^j$ [D] $\sum_{j=0}^{17} 24 + 3(j + 1)$
- Given $29 + 33 + 37 + 41 + \dots$, write the first 10 terms of this series in summation notation.
 [A] $\sum_{j=0}^{10} 29(4)^j$ [B] $\sum_{j=0}^9 4j + 29$
 [C] $\sum_{j=1}^9 4j + 29$ [D] $\sum_{j=0}^{10} 29 + 4(j + 1)$

- Given $21 + 29 + 37 + 45 + \dots$, write the first 18 terms of this series in summation notation.
 [A] $\sum_{j=0}^{17} 8j + 21$ [B] $\sum_{j=0}^{18} 21 + 8(j + 1)$
 [C] $\sum_{j=1}^{17} 8j + 21$ [D] $\sum_{j=0}^{18} 21(8)^j$

- Express the sum in summation notation:
 $23 + 27 + 31 + 35 + \dots + [4(11) + 23]$
 [A] $\sum_{k=0}^{12} 23 + 4(k + 1)$ [B] $\sum_{k=0}^{12} 23(4)^k$
 [C] $\sum_{k=0}^{11} 4k + 23$ [D] $\sum_{k=1}^{11} 4k + 23$

- Express the sum in summation notation:
 $-15 - 7 + 1 + 9 + \dots + [8(11) - 15]$

[A] $\sum_{k=1}^{11} 8k - 15$ [B] $\sum_{k=0}^{12} -15(8)^k$
 [C] $\sum_{k=0}^{12} -15 + 8(k + 1)$ [D] $\sum_{k=0}^{11} 8k - 15$

- Express the sum in summation notation:
 $\frac{2}{1} + \frac{3}{2} + \frac{4}{3} + \frac{5}{4} + \dots + \frac{16+1}{16}$

[A] $\sum_{k=1}^{16} \frac{k+1}{k}$ [B] $\sum_{k=0}^{16} -13(6)^k$
 [C] $\sum_{k=0}^{16} \frac{k}{k+1}(k+1)$ [D] $\sum_{j=1}^{16} \frac{7}{5}$

Write in summation notation:

- $21 + 25 + 29 + 33 + 37$

[A] $\sum_{j=0}^4 (4j + 21)$ [B] $\sum_{j=0}^4 (21j + 4)$
 [C] $\sum_{j=0}^4 (21 + 4(j + 1))$ [D] $\sum_{j=0}^4 21(4)^j$

- $25 + 30 + 35 + 40 + 45$

[A] $\sum_{j=1}^5 (5j + 25)$ [B] $\sum_{j=0}^4 25(5)^j$
 [C] $\sum_{j=0}^4 (5j + 25)$ [D] $\sum_{j=0}^4 (25 + 5(j + 1))$

- $28 + 32 + 36 + 40 + 44 + 48 + 52$

[A] $\sum_{j=0}^6 (28 + 4(j + 1))$ [B] $\sum_{j=0}^6 28(4)^j$
 [C] $\sum_{j=0}^6 (4j + 28)$ [D] $\sum_{j=1}^7 (4j + 28)$

- [1] A
- [2] B
- [3] B
- [4] A
- [5] C
- [6] D
- [7] A
- [8] A
- [9] C
- [10] C