

NAME: \_\_\_\_\_

1. 060326b, P.I. A2.A.35

Evaluate:  $2 \sum_{n=1}^5 (2n - 1)$

2. 010601b, P.I. A2.A.35

What is the value of  $\sum_{n=1}^5 (-2n + 100)$ ?

[A] 470    [B] 530    [C] 70    [D] 130

3. 080904b, P.I. A2.A.35

What is the value of  $\sum_{k=0}^2 3(2)^k$ ?

[A] 21    [B] 43    [C] 15    [D] 19

4. 060421b, P.I. A2.A.35

The projected total annual profits, in dollars, for the Nutyme Clothing Company from 2002 to 2004 can be approximated by the model

$$\sum_{n=0}^2 (13,567n + 294), \text{ where } n \text{ is the year and}$$

$n = 0$  represents 2002. Use this model to find the company's projected total annual profits, in dollars, for the period 2002 to 2004.

5. 080418b, P.I. A2.A.35

A ball is dropped from a height of 8 feet and allowed to bounce. Each time the ball bounces, it bounces back to half its previous height. The vertical distance the ball travels,

$d$ , is given by the formula  $d = 8 + 16 \sum_{k=1}^n \left(\frac{1}{2}\right)^k$ ,

where  $n$  is the number of bounces. Based on this formula, what is the total vertical distance that the ball has traveled after four bounces?

[A] 8.9 ft    [B] 22.0 ft

[C] 15.0 ft    [D] 23.0 ft

6. 060807b, P.I. A2.A.34

Which expression represents the sum of the sequence 3, 5, 7, 9, 11?

[A]  $\sum_{n=1}^5 (2n + 1)$     [B]  $\sum_{n=1}^5 3n$

[C]  $\sum_{n=0}^5 (2n + 1)$     [D]  $\sum_{n=1}^5 (3n + 1)$

[2] 50, and appropriate work is shown, such as  $2(1 + 3 + 5 + 7 + 9)$ .

[1] Appropriate work is shown, but one computational error is made.

or [1] Appropriate work is shown, but  $(1 + 3 + 5 + 7 + 9)$  is not multiplied by 2, resulting in an answer of 25.

or [1] 50, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[1] incorrect procedure.

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[2] A

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[3] A

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[2] 41,583, and appropriate work is shown.

[1] Appropriate work is shown, but one conceptual error or one computational error is made.

or [1] 41,583, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[4] incorrect procedure.

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[5] D

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[6] A

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