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1. Compute the value of the double summation: $\sum_{i=0}^{3} \sum_{j=i}^{5} (2i + 5j)$

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2. Find the big-*O* estimate for the function: $(n^2 \log n + n^3)(2n^2 + 3)$

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3. Write out the algorithm which describes the computation of: $\sum_{i=0}^{3} \sum_{j=i}^{5} 2i + 5j$

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4. If a, b, and c are integers with $a = b + c$, show that gcd(a,b) = gcd(b,c).
(Hint: if $x \leq y$ and $x \geq y$, then $x = y$).

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5. If a, b, and m are positive integers with $a = b$ **mod** m, show that a **mod** $m = b$ **mod** m.

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6. Use the Euclidean Algorithm to find gcd(3268, 160).