Extra Induction Problems

Use mathematical induction to prove that each of the following statements are true for all $n \in \mathbb{N}$.

1. $2 + 5 + 8 + \cdots + (3n - 1) = n(3n + 1)/2$
2. $\sum_{i=1}^{n}(2i + 3) = n(n + 4)$
3. $7^n - 2^n$ is divisible by 5.
4. $\left(1 + \frac{1}{2}\right)^n \geq 1 + \frac{n}{2}$