Skill Drill 12 – Induction NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Prove the following by induction: for all integers **n ≥ 1**

**2 + 4 + 6 + … + 2n = n(n+1)** ( i.e. The sum of the first **n** even numbers is equal to **n(n+1)** )

2. Prove by induction:  **n2 + n** is divisible by **2** for all integers **n ≥ 1**