

1. Solve and check the following recurrence relation:

$$S_n - 2S_{n-1} = 3n \quad n \geq 1 \quad S_0 = 2$$

2. Solve and check the following recurrence relation:

$$T_n - T_{n-1} = 3n \quad n \geq 1 \quad T_0 = 2$$

3. Solve the following recurrence relation:  $I_n - I_{n-1} = \frac{n}{2} - \frac{1}{2}$   $I_3 = \frac{3}{2}$

No need to do a formal check, but check your answer gives:  $I_{100} = 2475$

Do you recognise this recurrence relation ?