QUESTION 01: **(05 POINTS)**

TEST OF ALGEBRA

Prove that: $\forall m \in \mathbb{N}^*; \sqrt{m+1} + \sqrt{m}$ is not an integer. (n'est pas entier)

QUESTION 02: **(03 POINTS)** We use the induction reasoning prove that $\forall n \in \mathbb{N}$: (Récurrence)

$$\forall x \in \mathbb{R} - \{1\}; \sum_{k=0}^{n} x^k = \frac{1 - x^{n+1}}{1 - x}.$$