

---

Show all work. 10 points.

1) Find the Taylor polynomial of degree 3 at 0 for  $f(x) = \sqrt{x+9}$

2) Calculate the first 5 partial sums of the series  $\sum_{n=1}^{\infty} \left( \frac{1}{n} - \frac{1}{n+1} \right)$