

**EXERCISE ONE** Find the McLaurin series of the function  $(1 + x^2)^{\frac{3}{2}} + 3 \cos(x)$ . Use it to find the limit

$$\lim_{x \rightarrow 0} \frac{(1 + x^2)^{\frac{3}{2}} + 3 \cos(x) - 4}{x^4}.$$