1. (littleoh:sindeg3)

   Is it true that $\sin(x) - x + \frac{x^3}{3!} = o(x^4)$?

2. (littleoh:cosdeg2)

   Is it true that $\cos(x) - 1 + \frac{x^2}{2} = o(x^3)$?

3. (littleoh:exp2deg4)

   Is it true that $e^{x^2} = 1 + x^2 + o(x^3)$?

4. (littleoh:expsqrt)

   Show that

$$e^x - \sqrt{1 + 2x} = o(x)$$