There is a short review of Taylor polynomial computation. Recall that there are three standard methods for computing Taylor polynomials.

1. Compute coefficients one at a time using derivatives of the function. After you take each derivative of $f(x)$ you can either:
   - Set equal to the symbolic derivative of standard form $T_n(x)$, plug in the center point, and solve for $a_n$,
   - or, you can use the formula
     \[
     a_n = \frac{f^{(n)}(c)}{n!}
     \]

   Both the standard form and the coefficient formula are provided on the Exam 2 Formula Sheet.

2. Substitute into a known series for one of the common functions. There are four very common examples. All are provided on the Formula Sheet.

3. Use binomial expansion, perhaps with a substitution. Binomial expansion and binomial coefficient formulas are on the Formula Sheet.

Write all Taylor polynomials:

- In standard form.
- With fully simplified coefficients.
- Without any terms with zero coefficient.