Taylor Polynomials

(Thanks to Faan Tone Liu)

Key Points:

- The formula for $T_n(x)$, the nth degree taylor polynomial for $f(x)$ centered at $x = a$ is:

- Other notes:

Examples:

1. (a) Find $T_6(x)$ the 6th degree Taylor Polynomial for $f(x) = \cos(x)$ centered at $a = 0$.

   (b) Use your $T_6(x)$ to estimate $\cos(5^\circ)$.

2. What is $T_n(x)$, the nth degree Taylor polynomial for $f(x) = \ln(x)$ centered at $a = 1$?

3. How could you estimate $\ln(1.6)$? What could you to do improve your estimate?