Name:_____

Evaluation 4

Introductory Programming
Fall 2006

1. Write a function called `cheby6` that evaluates the 6th Chebyshev polynomial. It should take an input variable, `x` and return

$$T_6(x) = 32x^6 - 48x^4 + 18x^2 - 1 \tag{1}$$

   Note: please write syntactically-correct MATLAB. No superscripts, no Greek letters, no multiplication by juxtaposition!

2. Write a function called `plot_cheby6` that takes two input variables, *low* and *high*, and that plots $T_6(x)$ at 100 points over the range $low \leq x \leq high$.

   Hint: you might want to use the MATLAB function `linspace`, which takes three input variables, `low`, `high` and `n`, and which returns a vector with `n` elements equally spaced between `low` and `high`.