Calc Medic AP Precalculus Ultimate Justification Guide

To justify that...	State/show that...
f is best modeled by a linear function	
f is best modeled by a quadratic function	
f is best modeled by an exponential function	
f is best modeled by a logarithmic function	
A function f is invertible	
The estimated output value found by using a known output and the average rate of change is an overestimate	
The estimated output value found by using a known output and the average rate of change is an underestimate	
f is positive	
f is negative	
f is increasing	
f is decreasing	
The rate of change of f is increasing	
The rate of change of f is decreasing	

f is concave up	
f is concave down	
The graph of f has a hole at $x = a$	
The graph of f has a vertical asymptote at $x = a$	
The graph of f has an x-intercept at $x = a$	
f has a relative maximum at $x = a$	
f has a relative minimum at $x = a$	
A model is considered appropriate for a data set.	
The value predicted by the model at a certain input gives an overestimate for the true value at that input	
The value predicted by the model at a certain input gives an underestimate for the true value at that input	
The distance between a point on the graph of $r = f(\theta)$ and the origin is increasing	
The distance between a point on the graph of $r = f(\theta)$ and the origin is decreasing	