Ex 1. The altitude (in feet) attained by a model rocket t seconds into its flight is given by the function $h(t)$. Find the maximum altitude attained by the rocket over the interval $[0, 5]$.

$$h(t) = -\frac{1}{3}t^3 - t^2 + 15t + 6$$

Ex 2. Mad Libs! Fill in the blanks:
(1) a profession: _____
(2) an adjective: _____
(3) a noun: _____
(4) a building material: _____
(5) another building material: _____

A _____ (1) has \$320 to spend on building a rectangular fence to protect his _____
(2) _____ (3) . Three sides of the fence will be constructed with _____ (4) at a
cost of \$2 per foot. The fourth side is to be constructed with _____ (5) at a cost of \$6
per foot. Find the dimensions of the largest area the fence can enclose.

Ex 3. You want to make a box with a square base (to hold the tears of your enemies). The cost of the materials are \$31 per square foot for the base, \$5 per square foot for the walls, and \$19 per square foot for the top. What are the dimensions of the cheapest box you can make that has 40 cubic feet of volume?