1. Suppose that the value of a highly-prized silver-plated author-signed calculus textbook is given, in dollars, by $V(t) = 100(1.05^t - 0.02t)$, where t is the number of years from the publication date of the text. At what rate is the value changing seven years after the book's publication? (3 points)

2. For what values of x is $f(x) = 4x^2 - 3^x$ both increasing and concave up? (Use your knowledge of derivatives to answer this question—though your calculator may be useful as you work out your answer.) (4 points)

3. Given the following data for f, g, f' and g',
   a. if $h(x) = f(x) \cdot g(x)$, find $h'(1)$.
   b. if $p(x) = f(x)/g(x)$, find $p'(2)$.
   (3 points)

x	1	2
f	6	4
f'	−2	−1
g	−4	−3
g'	3	5