

Math Review Questions

1. Find the derivate of the following functions with respect to q .

a) $c = 2q^2$

b) $c = \frac{q^3}{(12-q)}$

c) $c = e^q$

2. Find the maximum of the following utility functions with respect to X

a. $U = x^2(120 - 4x)$

b. $U = x^{\frac{1}{4}} * \left(\frac{I - P_b x}{P_c} \right)^{\frac{3}{4}}$,

where I , P_b and P_c are constants so you treat them like they were some number (e.g. 2)