

Math 162**Quiz 10**

Show all work in a neat and organized fashion. Clearly indicate your answers.
10 points possible.

1. Give the derivative formula for each function.

(a) (3 pts.) $K(x) = (4x^2 + 7x + 9)(\ln x)$

(b) (3 pts.) $H(x) = (6.9x + 12.5)^7 e^{(x^4 - x^2)}$

2. (4 pts.) The table below (based on data from the *Statistical Abstract of the United States*, Bernan Press, 1992 and 1994) gives the number of imported passenger cars (in thousands) sold in the United States from 1984–1992.

Year	Number of Imported Passenger Cars Sold (thousands)
1984	2439
1985	2838
1986	3245
1987	3196
1988	3004
1989	2699
1990	2403
1991	2058
1992	1938

(a) Find a model to fit the data.

(b) Use the model to find how rapidly the number of cars was changing in 1988.