Retake 5

MAT 123, Summer 2016

Name:

1. (10 points) Define the matrices $A = \begin{bmatrix} 1 & 6 \\ 3 & -5 \\ -2 & 4 \end{bmatrix}$, $B = \begin{bmatrix} 1 \\ 0 \end{bmatrix}$, and $C = \begin{bmatrix} 4 & -6 \\ 1 & 2 \end{bmatrix}$.

   Evaluate each product, or state that it is undefined.

   (a) AB

   (b) BA

   (c) C^2

2. (10 points) Suppose the the costs for a printmaking firm are described by the equation

$$C = 8.5x + 75,$$

where y is number of copies made (in thousands) and C is the cost (in thousands of dollars). The corresponding equation for the firm's revenue is

$$R = 10x.$$

How many copies does the company need to produce in order to break even?