Additional Problems Assignment 5

1. Let A, B and C be $n \times n$ matrices, $k \in \mathbb{R}$. Prove the following:
   (a) $A + (B + C) = (A + B) + C$
   (b) $k(A + B) = kA + kB$
2. Let A be an $n \times m$ matrix and $\vec{x} \in \mathbb{R}^m$ then show $A(k\vec{x}) = k(A\vec{x})$.