

Name: \_\_\_\_\_  
Student ID #: \_\_\_\_\_

**Mini-Quiz # 9**  
MAT-022A-Summer Session II (8/28/09)

You have 10 minutes. You may only use a pencil (or pen) and scrap paper.

1. Write down a basis for the following vector spaces and write down their dimension. You do not have to show any work. (2 points each)

(a)  $\mathbb{R}^6$

(b)  $P_5$

(c)  $\mathbb{R}^{3 \times 2} = M_{32}$

(d) The space of all  $3 \times 3$  upper triangular matrices

(e) The space of all  $2 \times 2$  symmetric matrices