Math 253, Section 102, Fall 2006
Quiz 1, September 20

Instructions

- The total time is 15 minutes.
- The total score is 25 points.
- Use the reverse side of each page if you need extra space.
- Calculators and cheat sheets are not allowed.

Problem	Points	Score
1	8	
2	8	
3	9	
TOTAL	25	

1. For what values of b are the vectors $(-6, b, 2)$ and (b, b^2, b) orthogonal?

(8 points)

2. Find two unit vectors orthogonal to both $\mathbf{i}+\mathbf{j}+\mathbf{k}$ and $2\mathbf{i}+\mathbf{k}$.

(8 points)

3. Find a symmetric equation for the line of intersection of the planes $x + y + z = 1$ and $x + z = 0$.

(9 points)