## Quiz 1 Calculus 3 8/29/2012

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. Suppose  $\mathbf{v} = \langle 8, -4 \rangle$  and  $\mathbf{w} = \langle -4, 6 \rangle$ . Express  $3\mathbf{v} - \mathbf{w}$  in the form  $\langle a, b \rangle$ .

2. Consider the points P(1,5,0) and Q(0,7,2). Find two unit vectors parallel to  $\overline{PQ}$ , and write them in the form  $a\mathbf{i} + b\mathbf{j} + c\mathbf{k}$ .