

**Math 304 Section 1 Quiz 18**

8/10/16

Name: \_\_\_\_\_

1. Compute  $\begin{bmatrix} 2 \\ 3 \\ -5 \end{bmatrix} \cdot \begin{bmatrix} -3 \\ 5 \\ -7 \end{bmatrix}$

2. If  $\mathbf{v} \cdot \mathbf{w} = 4$  and  $\mathbf{v} \cdot \mathbf{x} = 3$ , compute  $(2\mathbf{w} - \mathbf{x}) \cdot \mathbf{v}$ .

3. Let  $\mathbf{v} = \begin{bmatrix} 1 \\ 0 \\ -2 \end{bmatrix}$ . Find  $\|\mathbf{v}\|$ .

4. Is  $\begin{bmatrix} 1 \\ -3 \\ 2 \end{bmatrix}$  orthogonal to  $\begin{bmatrix} 1 \\ 3 \\ 2 \end{bmatrix}$ ?

5. Is  $\begin{bmatrix} 1 \\ -2 \\ 3 \end{bmatrix}$  orthogonal to  $\begin{bmatrix} 1 \\ 2 \\ 1 \end{bmatrix}$ ?

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