Math 275 1,5,6 Fall 2020 Week 1 and 2 Quiz

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This is due on Sunday 9/6 at 11:55 pm, the same due time as your Webassign. There are four problems, one on each page. One way to complete the quiz is to do it by hand on a printed copy of the quiz, which is why I give a full page for each problem, then scan the results and return them to me. But you can do it in other ways too. However you do it, please show all work.

1. Find real numbers s, t such that $s\langle 1, 2\rangle + t\langle 3, -1\rangle = \langle 11, 2\rangle$. Hint: you will be solving two equations in two unknowns.

2. Determine the angle between the vectors $\langle 1, 2, 1 \rangle$ and $\langle 1, -1, 3 \rangle$.

3. Find the equation of the plane through the points (1,2,3), (3,0,1), (2,2,1).

4. Find symmetric equations for the line of intersection of the planes

$$2x - y + z = 10$$

and

$$x + 2y - 3z = 1.$$