

Name: _____

Calculus 251:C3 Quiz #4 - 6/1/2020 Topic: Section 12.5

Instructions. Answer the questions in the spaces provided or on your own paper, then scan and upload to Canvas. Show and label all of your work. Responses with no work may receive no credit even if the answer is correct.

7 pts

- (1) Find an equation of the plane that contains both of the following parameterized lines.

You may assume that the two lines intersect.

$$\vec{r}_1(t) = \langle 2 + 2t, 4 - 2t, -5 + t \rangle$$

$$\vec{r}_2(t) = \langle 7 - t, -1 + t, -4 - 2t \rangle$$

3 pts

- (3) Determine whether these two planes are perpendicular to each other. Justify your answer.

$$\mathcal{P}_1 : 4x - 3y + 2z = 13$$

$$\mathcal{P}_2 : 2x + 2y - z = -5$$