

**MTH 111, Math. for the Architects, Quiz Five Spring 2014**

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**QUESTION 1.** An equation of the plane  $P$  is  $3x + 4y - 5z = 12$  and an equation of the line  $L$  is  $x = 1 + 2t, y = 1 + t, z = 1 + 2t$ . Does  $L$  intersect  $P$ ? If no, find  $|LP|$  (the distance between  $L$  and  $P$ ).

**QUESTION 2.** Given that the three points :  $(1, 1, 0), (2, 1, 0), (3, 3, 1)$  lie in the plane  $P$ . Find an equation of  $P$ .

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