

QUIZ 5 - MATH 251

Friday, February 23

YOUR NAME: \_\_\_\_\_

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Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Find an equation of the plane that is parallel to the plane with equation  $7x - 3y + z = 10$  and passes through the point  $(1, 1, 0)$ .

2. Find a vector or parametric equation(s) of the line that is perpendicular to the plane with equation  $2x - y - z = 2018$  and passes through the point  $(-1, 7, 10)$ .

3. Find an equation of the plane containing the points  $P = (1, -1, 0)$ ,  $Q = (0, -2, 5)$  and  $R = (1, 1, 1)$ .

4. Find an equation for the intersection of the planes with equations  $2x - y = 3$  and  $x + y + z = 5$ .