

## MTH241 Fall 2024: Quiz 02

Name:

UID:

Closed book, no calculator, show your work clearly.

1. (5pt) Let  $P = (-3, 2, -1)$ ,  $Q = (-7, 3, -4)$  and  $R = (-5, -1, 0)$ . Find the area  $A$  of the triangle PQR. (Grading: **2pt**: working; **2pt**: cross product; **1pt**: area)

2. (5pt) Let the point  $(1, -2, 5)$  and the plane be defined as  $3(x - 1) - 4(y + 2) + 12z = 0$ . Show tht the point is not on the plane and find the distance  $D$  from the point to the plane. (Grading: **1pt**: working; **2pt**: proof; **2pt**: distance)