1. Two vectors are parallel provided that one is a scalar multiple of the other. Determine whether the vectors **a** and **b** are parallel, perpendicular, or neither.

**a** = 12**i** – 20**j** + 17**k** and **b** = -9**i** + 15**j** + 24**k**

1. Find a unit vector **n** perpendicular to the plane through the points P(1, 3, -2),

Q(2, 4, 5), and R(-3, -2, 2). Then find the distance from the origin to this plane by computing **n** • .