Name:_____

Math 2030, Fall 2017, Quiz 2
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No calculators needed or allowed.

Let $P_0 = (1, 3, 4)$, $P_1 = (2, 2, 5)$, and $P_2 = (3, 2, 7)$.
Let $Q = (-1, 0, 8)$.

1. Compute the vectors $\vec{u} = \vec{P_0P_1}$ and $\vec{v} = \vec{P_1P_2}$.
2. Compute the cross product $\vec{n} = \vec{u} \times \vec{v}$.
3. Find an equation for the plane through P_0, P_1 and P_2.
4. Find an equation for the line through Q in the direction of $\vec{n}$.
5. Find the intersection of that line with the plane from the preceding problem.
6. How far is Q from the plane?