2015 2학기 정대원

9.1

1 $P(2,1,0)$ $Q(5,3,0)$ $Q-P$

$V=[3,2,0]$ $|V|=\sqrt{9+4+0}=\sqrt{13}$

단위벡터 $\left[\frac{3}{\sqrt{13}}, \frac{2}{\sqrt{13}}, 0\right]$

3. $P(-3.5, 4.0, -1.5)$ $Q(7.5, 0, 1.5)$

$V=[11, -4, 3]$ $|V|=\sqrt{11^2+4^2+3^2}=\sqrt{146}$

단위벡터 $\left[\frac{11}{\sqrt{146}}, \frac{-4}{\sqrt{146}}, \frac{3}{\sqrt{146}}\right]$

5

$P(0,0,0)$ $Q(3,\sqrt{7},-3)$

$V=[3,\sqrt{7},-3]$ $|V|=\sqrt{3^2+7+(-3)^2}=5$

단위벡터 $\left[\frac{3}{5}, \frac{\sqrt{7}}{5}, \frac{-3}{5}\right]$

7

$Q-P=\left[-\frac{1}{4}, 2, \frac{1}{2}\right]$ $P\left(\frac{7}{4}, -2, \frac{3}{4}\right)$

$Q\left(\frac{6}{4}, 0, \frac{5}{4}\right)$ $|V|=\sqrt{\left(-\frac{1}{4}\right)^2+2^2+\left(\frac{1}{2}\right)^2}=\frac{\sqrt{69}}{4}$

9 $Q-P \Rightarrow [3,1,-3]$ $P(-3,-1,-1)$

$Q(0,0,-4)$ $|V|=\sqrt{9+1+9}=\sqrt{19}$