

12.4

2 Both distribute and expand determinants

#4 $-i - 2j - 7k$

#10 $\pm\left(\frac{2}{\sqrt{30}}i + \frac{\sqrt{5}}{\sqrt{6}}j - \frac{1}{\sqrt{30}}k\right)$

#12 $\pm\frac{1}{\sqrt{5}}(2j + k)$

#16 $9\sqrt{13}$

#20 1

#22 45

#28 Volume(tetrahedron) = 1/2 Volume (parallelepiped)