1. What is the shortest distance between point A and the diagonal BC of the parallelepiped? (use vector methods).

2. A force $\mathbf{F}$ is directed from point A(1,2,3) to point B(4,3,5). If the x-component of the force is 120 N, find the y and z components of $\mathbf{F}$.

3. Express the unit vectors $\mathbf{n}$ and $\lambda$ in terms of $\mathbf{i}$ and $\mathbf{j}$. What are the x and y components of $\mathbf{r}$=3.0ft $\mathbf{n}$-1.5ft $\lambda$? The triangle is a right triangle.
4. Find the components of $\mathbf{r}_{AB}$ along:
   a, the y-axis
   b, along the unit vector $\mathbf{a}$