EQUATIONS OF PLANES

If possible, for each problem below find the equation for the plane containing the point $P=(1,2,3)$ and the vectors $\vec{u}$ and $\vec{v}$. Write your answer in the form $z=Ax+By+C$, if possible.

1. $\vec{u}=2\hat{i}+3\hat{j}$ and $\vec{v}=3\hat{i}-2\hat{j}$

2. $\vec{u}=2\hat{i}+3\hat{j}$ and $\vec{v}=4\hat{i}+3\hat{j}$

3. $\vec{u}=\hat{i}+\hat{j}-5\hat{k}$ and $\vec{v}=2\hat{i}+2\hat{j}-4\hat{k}$

4. $\vec{u}=2\hat{i}+3\hat{j}+\hat{k}$ and $\vec{v}=3\hat{i}-2\hat{j}+\hat{k}$

5. $\vec{u}=2\hat{i}+3\hat{j}+\hat{k}$ and $\vec{v}=2\hat{i}+2\hat{j}-10\hat{k}$