

$$\begin{pmatrix} a & b & c \\ d & e & f \\ g & h & i \end{pmatrix} \begin{pmatrix} u \\ v \\ w \end{pmatrix} =$$

$$\rightarrow au + bv + cw = x$$

$$du + ev + fw = y$$

$$gu + hv + iw = z = xy$$

$$\rightarrow gu + hv + iw = (au + bv + cw)(du + ev + fw)$$

$$\rightarrow gu + hv + iw = adu^2 \dots$$

I'm getting really lost doing this...  
 I'm not sure how to continue from  
 here and unfortunately I've run out  
 of time. It's 11:48 and I have  
 to stop to scan everything.