Math2210 Quiz 3 (Sections 11.4, 11.5, 11.6) Summer, 2010 Dylan Zwick

Name _____ Date _____

Instructions: Please show all of your work as partial credit will be given where appropriate, **and** there may be no credit given for problems where there is no work shown. All answers should be completely simplified, unless otherwise stated.

1. If $\boldsymbol{a}=\langle 2,1,3\rangle$, $\boldsymbol{b}=\langle 0,1,2\rangle$ and $\boldsymbol{c}=\langle -1,-2,1\rangle$,

   (a) find $\boldsymbol{a}\times(\boldsymbol{b}+\boldsymbol{c})$.

$\boldsymbol{a}\times(\boldsymbol{b}+\boldsymbol{c})$ = _____

   (b) find $\boldsymbol{a}\cdot(\boldsymbol{b}\times\boldsymbol{c})$

$\boldsymbol{a}\cdot(\boldsymbol{b}\times\boldsymbol{c})$ = _____

2. Find a parametric equation for the line perpendicular to both of the vectors $\boldsymbol{a}=2\boldsymbol{i}-3\boldsymbol{j}+2\boldsymbol{k}$ and $\boldsymbol{b}=-3\boldsymbol{i}+2\boldsymbol{j}-\boldsymbol{k}$ and that passes through the origin (0,0,0).

Answer 2: _____

3. Find the symmetric equations of the line through (4, 1, 3) and (1, -1, 0).

Answer 3: _____