

group homomorphism

Source: <http://sci.tech-archive.net/Archive/sci.math/2007-06/msg05274.html>

- *From:* nojib@xxxxxxxxxxxxxxxxxxxx
 - *Date:* Thu, 28 Jun 2007 10:43:42 -0700
-

Hello.

I'm trying to determine the kernel of the following group homomorphism:

$$k[X/Y, Z/Y]/f_1 + k[X/Z, Y/Z]/f_2 \rightarrow k[X/Y, Z/Y, Y/Z]/f_1,$$

where k is a (alg. closed) field and F is a given homogeneous polynomial in variables X, Y, Z of degree d and $f_1(X/Y, Z/Y) = F(X/Y, 1, Z/Y)$ and $f_2(X/Z, Y/Z) = F(X/Z, Y/Z, 1)$.

This is a problem in section 2 of chapter 3 of hartshorne. The answer seems to be k .

Thanks,
N.

.