$$= \frac{(Y_{21}-Y_{11})(X_{11}-X_{12})(X_{21}-X_{22}) - (Y_{21}-Y_{22})(X_{11}-X_{12})X_{21} + (Y_{11}-Y_{12})(X_{21}-X_{22})X_{11}}{(Y_{11}-Y_{12})(X_{21}-X_{22}) - (Y_{21}-Y_{22})(X_{11}-X_{12})} = \frac{N}{D}$$

$$N = (Y_{21}X_{11} - Y_{21}X_{12} - Y_{11}X_{11} + Y_{11}X_{12} + Y_{11}X_{11} - Y_{12}X_{11})(X_{21}-X_{22}) - (X_{21}Y_{21} - X_{21}Y_{22})(X_{11}-X_{12}) = A - B$$

$$A = X_{11}X_{21}Y_{21} - X_{11}X_{22}Y_{21} - X_{12}X_{21}Y_{21} + X_{12}X_{22}Y_{21} - X_{11}X_{21}Y_{11} + X_{11}X_{22}Y_{11} + X_{12}X_{21}Y_{11} - X_{12}X_{22}Y_{11} + X_{11}X_{21}Y_{11} - X_{11}X_{22}Y_{11} - X_{11}X_{21}Y_{12} + X_{11}X_{22}Y_{12}$$

$$B = X_{11}X_{21}Y_{21} - X_{12}X_{21}Y_{21} - X_{11}X_{21}Y_{22} + X_{12}X_{21}Y_{22}$$

$$N = A - B = -X_{11}X_{22}Y_{21} + X_{12}X_{22}Y_{21} + X_{12}X_{21}Y_{11} - X_{12}X_{22}Y_{11} - X_{11}X_{21}Y_{12} + X_{11}X_{22}Y_{12} + X_{11}X_{21}Y_{22} - X_{12}X_{21}Y_{22} =$$

$$= (X_{11}-X_{12})(X_{21}Y_{22} - X_{22}Y_{21}) - (X_{21}-X_{22})(X_{11}Y_{12} - X_{12}Y_{11})$$

$$X_0 = \frac{-N}{-D} = \frac{(X_{11}Y_{12} - Y_{11}X_{12})(X_{21}-X_{22}) - (X_{11}-X_{12})(X_{21}Y_{22} - Y_{21}X_{22})}{(X_{11}-X_{12})(Y_{21}-Y_{22}) - (Y_{11}-Y_{12})(X_{21}-X_{22})}$$

$$Y_0 = \frac{Y_{11}-Y_{12}}{X_{11}-X_{12}}X_0 + Y_{11} - \frac{Y_{11}-Y_{12}}{X_{11}-X_{12}}X_{11} = \frac{Y_{11}-Y_{12}}{X_{11}-X_{12}}(X_0 - X_{11}) + Y_{11}$$

This last formula could be rewritten in a form similar to the one for X_0.