$$-\frac{(x3 - Ys) ((x1 - Xs) (x2 - Xsdot) + (x3 - Ys) (x4 - Ysdot))}{\left((x1 - Xs)^2 + (x3 - Ys)^2\right)^{3/2}} + \frac{x4 - Ysdot}{\sqrt{(x1 - Xs)^2 + (x3 - Ys)^2}}$$