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**Tony Shaska\*** (shaska@oakland.edu). *The addition on Jacobian varieties from a geometric viewpoint.*

We give a geometric interpretation of the group law for Jacobian varieties by extending the geometric construction of chords and tangents on an elliptic curve to  $\text{Jac } \mathcal{X}$ . For any given curve  $\mathcal{X}$  and reduced divisors  $D_1$  and  $D_2$  in  $\text{Jac } \mathcal{X}$ , we define a new curve  $\mathcal{Y}$ , such that the intersection divisor of  $\mathcal{X}$  and  $\mathcal{Y}$  determines the divisor  $(D_1 + D_2)$ . We give exact formulas for  $\mathcal{Y}$  for superelliptic Jacobians. (Received January 19, 2020)