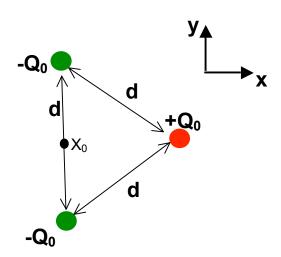
Problem 1 (25 points)

Consider the configuration of point charges shown below, with two negative charges $-Q_0$ and a positive charge $+Q_0$ forming a equilateral triangle (all sides have length d) in the x-y plane.

- (a) What is the direction and magnitude of the force on the positive charge $+Q_0$ in terms of the given quantities?
- (b) What is the direction and magnitude of the electric field at point x₀ halfway in between the two negative charges?
- (c) Now, assume that the two negative charges are fixed in space and that $+Q_0$ is freely movable. Describe the motion $+Q_0$ would undergo if released from rest from the original position shown below (2-3 sentences)



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