We would like to scan convert in an efficient way the parabola of equation:

\[ y = ax^2 + bx + c \]

1. Describe an efficient algorithm to draw this curve. When is the scan implemented on the x axis and when on the y axis? Describe the derivation of both cases.

2. Is it possible to take advantage of the symmetry of the parabola? If yes, describe how.

3. What is the saving of this algorithm compared to the naïve algorithm?

Submit answers to the questions and pseudocode both on paper (before the beginning of the class) and by email (cs155@cs.brandeis.edu).