

### 9.3 Quadratic Inequalities in two variables

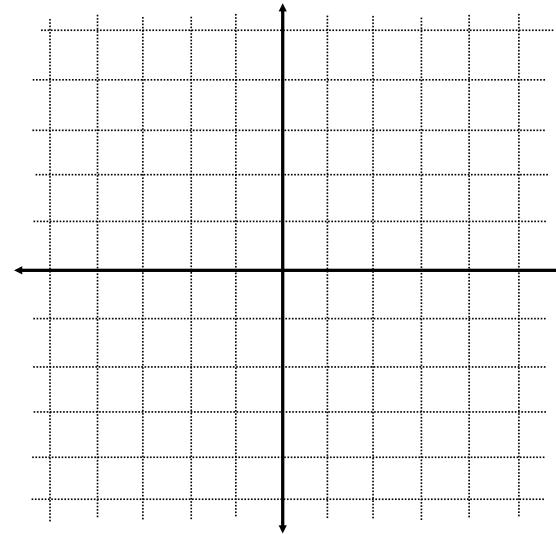
\* A quadratic inequality in two variables describes an area on a cartesian plane either above or below the line... much like a linear inequality in two variables.

\* As before, if we have an  inequality ( $<$  or  $>$ ), we represent the boundary by a  to indicate that the line itself is not part of the solution and we use a test point to determine on which side the solution lies.

ex.  $y < x^2 - 2x - 3$

1) *determine the line type you will use*

2) *graph  $y = x^2 - 2x - 3$*



3) *Test a point: Always  $(0, 0)$  if possible*

4) *Conclude by shading the appropriate area.*

\* On Ti-83

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