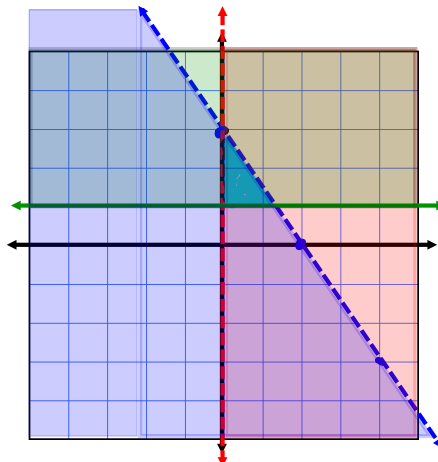


Graph the solution to each system of inequalities in a coordinate plane.

*1) $3x + 2y < 6$
 $x > 0$ ← vertical
 $y \geq 1$ ← horizontal

$3x + 2y < 6$
 $\frac{2y}{2} < \frac{-3x + 6}{2}$
 $y < -\frac{3}{2}x + 3$



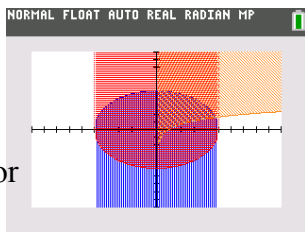
circle $(0,0)$ $r=5$

$(x-h)^2 + (y-k)^2 = r^2$ (h,k) center

*2) $x^2 + y^2 < 25$

$\ln e^y \geq x$

$y \geq \ln x$



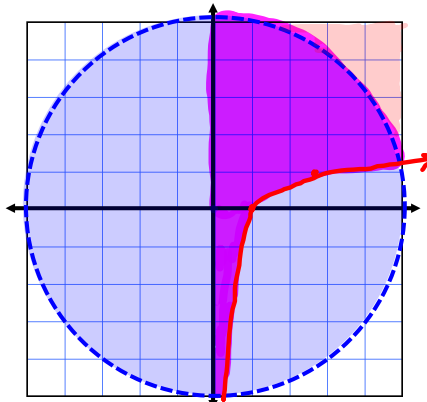
Work for calculator

$x^2 + y^2 < 25$

$\sqrt{y^2} < \sqrt{25 - x^2}$

$|y| < \sqrt{25 - x^2}$

$y < +\sqrt{25 - x^2}$ and $y > -\sqrt{25 - x^2}$



Note, the $\ln x$ graph does not extend into Quadrants II or III because of the domain.

Write a set of inequalities to describe the region.

$$y \leq x + 3$$

$$x^2 + y^2 < 9$$

$$y \geq 0$$

$$\lceil x \rceil \leq y$$

