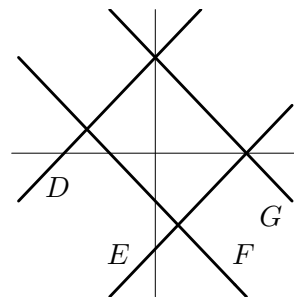5. [6 points]   Consider a parametric curve given by $x(t) = f(t)$, $y(t) = g(t)$, where $f(5) = 0$, $g(5) = 3$, $f'(5) > 0$ and $g'(5) < 0$. Which of the lines D, E, F, or G in the figure below could be the line tangent to the curve $(x(t), y(t))$ at $t = 5$? Explain.

6. [6 points]   Find a set of inequalities in polar coordinates that describe the shaded triangle in the figure shown to the right, below.