"Berlin" -- Graphing Inequalities, Circles, Parabolas

Given:

$A = \{(x,y) \mid y < 0\}$

$B = \{(x,y) \mid y \le x^2 - 3\}$

$C = \{(x,y) \mid x^2 + y^2 = 49\}$

$D = \{(x,y) \mid x^2 + y^2 < 49\}$

$G = \{(x,y) \mid (x-3)^2 + (y-2)^2 = 1\}$

$H = \{(x,y) \mid (x+3)^2 + (y-2)^2 = 1\}$

$E = \{(x,y) \mid y \ge 5\}$

$F = \{(x,y) \mid 2y + x \ge 12\}$

$M = \{(x,y) \mid y \ge 0\}$

Graph each of the following on this single coordinate axes:

$A \cap B$ $C \cap M$ $D \cap E$ $D \cap F$ $G \cup H$