In 1-5 Find An equation of

1) A. The line with slope $-\frac{3}{4}$ which passes through the point $(3,-1)$

B. The circle with center $(-2,2)$ which passes through the point $(4,-6)$

2) the set of points (x,y) whose sum of the distances from $(4,5)$ and $(1,-3)$ is 10.

3) the rectangular hyperbola with transverse axis parallel to the x-axis with center at $(-6,-5)$ and which passes through the point $(7,7)$

4) A. the line parallel to $7x -24y -17 = 0$ which passes through the point $(5,-2)$

B. What is the distance between the two lines?

5) the perpendicular bisector to the line segment between the points $(2,-1)$ and $(11,4)$

6) LIST ALL POSSIBILITIES OF WHAT THE GRAPH COULD BE

A. $4x^2 -xy -7y^2 + Dx + Ey + F = 0$, $\parallel A \neq 0$

B. $2x^2 -8xy +4y^2 + Dx + Ey + F = 0$, $\Delta \leq 0$

C. $5x^2 -6xy +2y^2 + Dx + Ey + F = 0$, $\Delta \neq 0$

7) A. Change $(r,\theta) = (-2, \frac{3\pi}{4})$ in rectangular co-ordinates

B. Change $(x,y) = (\sqrt{3}, -3)$ into polar co-ordinates

In 8 & 9 graph the equation in polar co-ordinates

8) $r = 2 -2\sin\theta$

9) $r = \theta/\pi$ for $\frac{\pi}{2} \leq \theta \leq 3\pi$

10) For the parabola: $y^2 -8x -2y +49 = 0$, find the co-ordinates of the focus & vertex; the equations of the axis and directrix; the eccentricity and graph it.

11) For the hyperbola: $xy +3x -5y -24 = 0$, find the co-ordinates of the center, foci and vertices; the equations of the asymptotes; the eccentricity and graph it.

12) Graph $\{(x,y): x=3+5\cos t; y=4+5\sin t; t \in [\frac{\pi}{2}, 2\pi]\}$ give its range and domain. Is it a function?

13) Graph $\{(x,y): (x^2+y^2-25)(x^2+y^2-2x+2y-2) \leq 0\}$ give its range and domain.