

BE-PRECALC Monday 4-5-10

① Make a table of the standard form (i.e. h, k form) of a parabola, circle, ellipse & hyperbola.

• Exam 1 Thurs.

Standard $\Rightarrow$ h, k Forms:

(P) $y = a(x-h)^2 + k$ or $x = a(y-k)^2 + h$

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

(E) $\frac{(x-h)^2}{a^2} + \frac{(y-k)^2}{b^2} = 1$ or $\frac{(y-k)^2}{a^2} + \frac{(x-h)^2}{b^2} = 1$
 $c^2 = a^2 - b^2$

(F) $\frac{(x-h)^2}{a^2} - \frac{(y-k)^2}{b^2} = 1$ or $\frac{(y-k)^2}{a^2} - \frac{(x-h)^2}{b^2} = 1$
 $c^2 = a^2 + b^2$

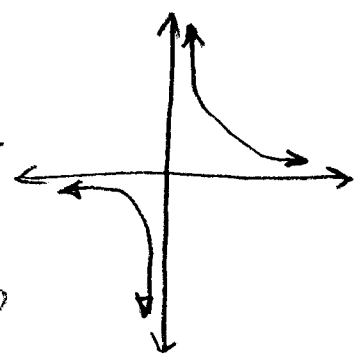
General Forms:

$Ax^2 + Bxy + Cx^2 + Dx + Ey + F = 0$

ROTATES
 or
 $XY = C = \text{special hyperbola}$

(EX) $XY = 1$

x	y = $\frac{1}{x}$
-2	$-\frac{1}{2}$
-1	-1
0	UNDEFINED
1	1
2	$\frac{1}{2}$



- (P) A or $C = 0$ (C) $A = C$ (E) $A \neq C$ BUT HAVE SAME SIGN (H) A AND C HAVE OPPOSITE SIGNS

EX1 Pg 663
Ch. 10-6

Identify the conic section:

(A) $6y^2 + 3x - 4y - 12 = 0$

(B) $3y^2 - 2x^2 + 5y - x - 15 = 0$

(C) $9x^2 + 27y^2 - 6x - 108y + 82 = 0$

(D) $4x^2 + 4y^2 + 5x + 2y - 150 = 0$

Ans)

(A) P (B) H (C) E (D) C

More practice: Pg. 667 # 4-7
13-24



Homework: Finish the problems we
don't finish in class —
pick a hyperbola and an
ellipse to graph.