

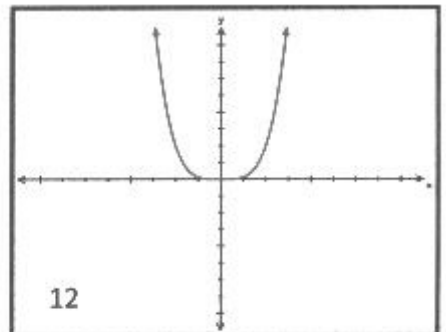
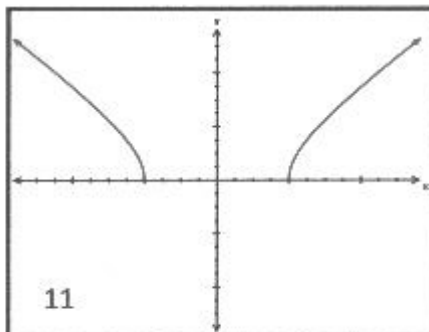
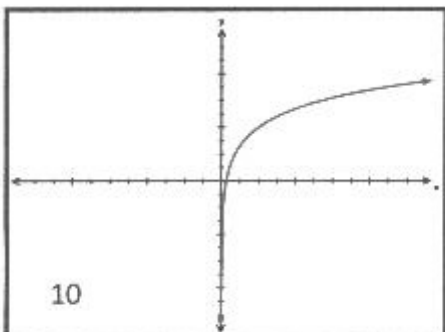
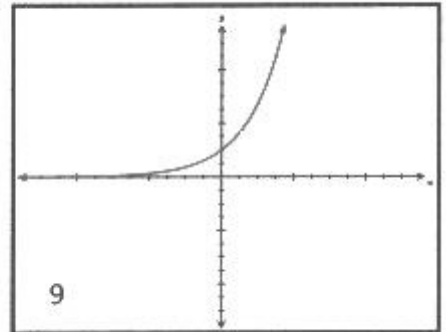
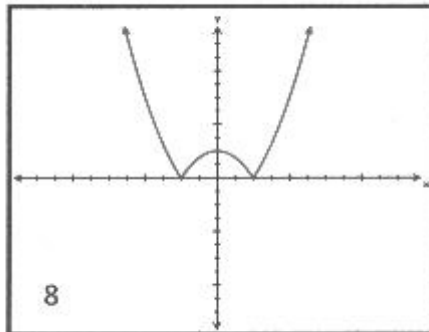
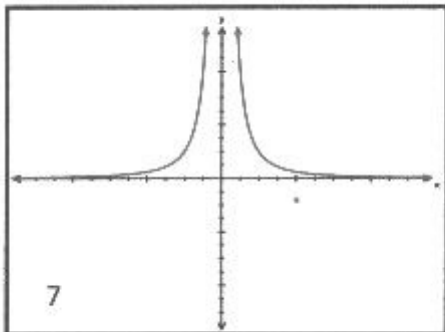
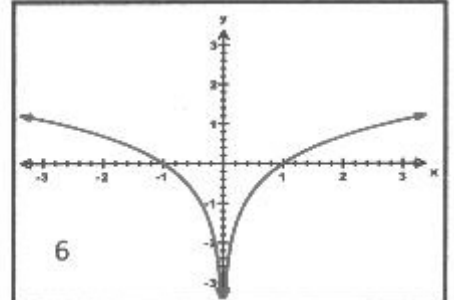
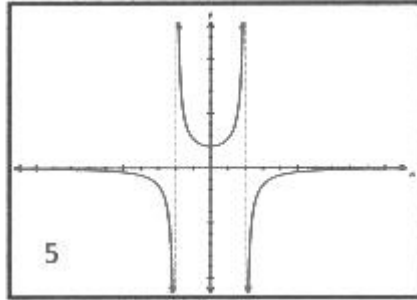
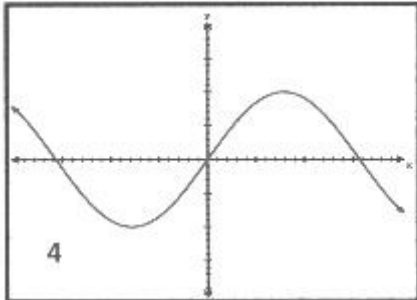
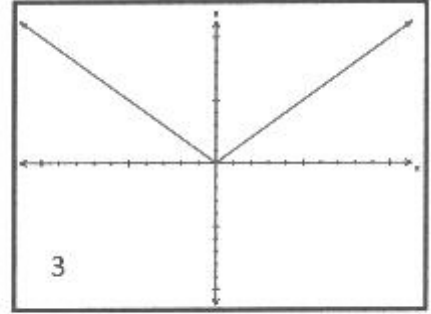
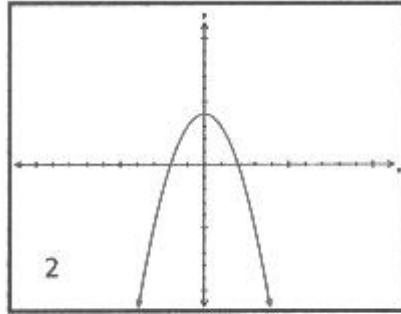
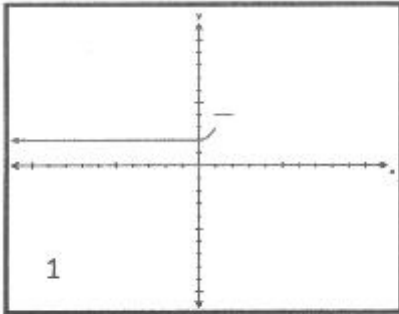
# AP CALCULUS

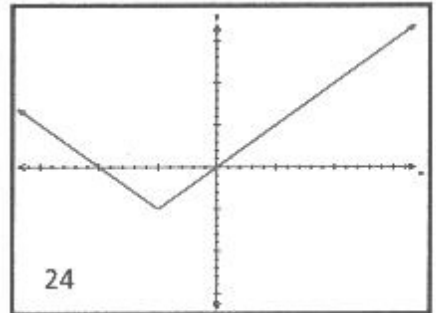
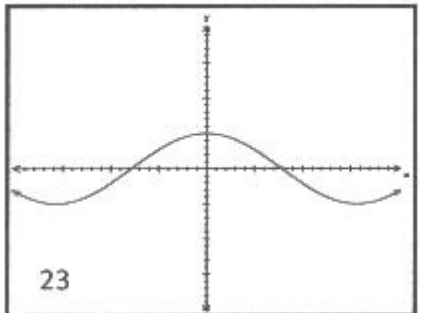
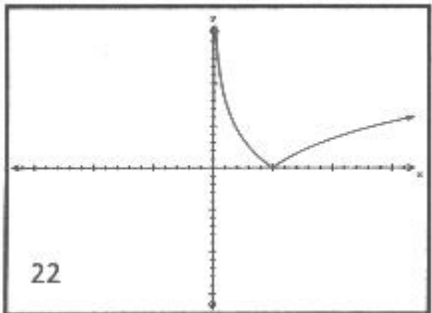
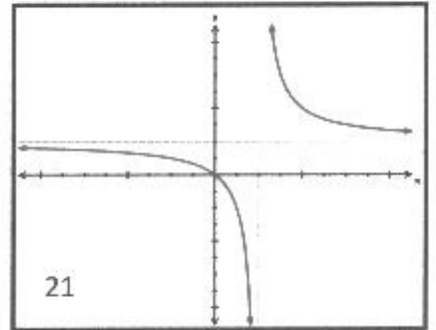
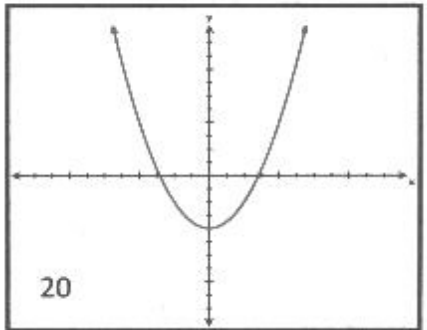
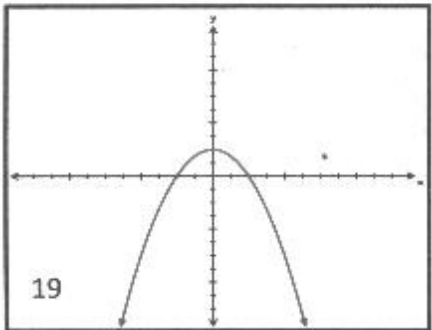
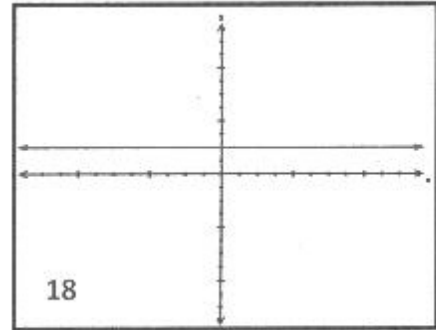
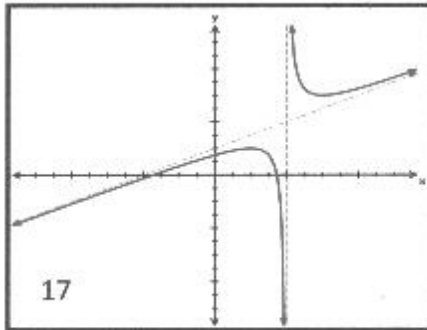
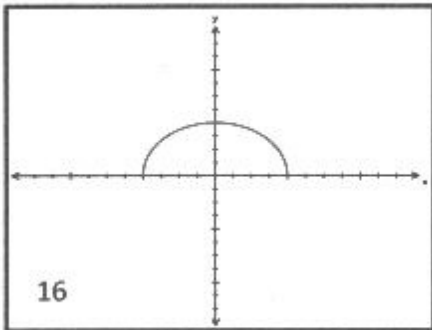
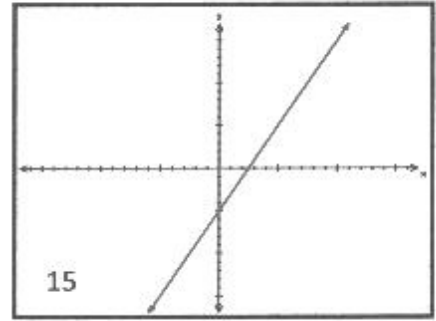
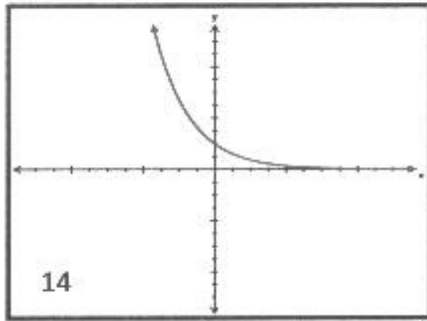
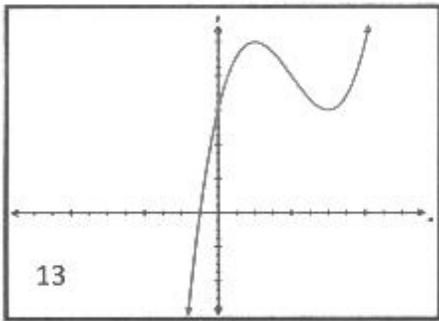
# GRAPH RECOGNITION LAB

- Objective: Students, working cooperatively with partners, will use prior knowledge of the characteristics of different types of equations and graphs, to match each graph to its symbolic/algebraic equation. No graphing calculator is allowed.
- Materials: In addition to this lab sheet with directions and recording table, there are two sheets of graphs and one sheet of equations.

Record your matches in the table.

GRAPH	EQUATION		GRAPH	EQUATION
1			13	
2			14	
3			15	
4			16	
5			17	
6			18	
7			19	
8			20	
9			21	
10			22	
11			23	
12			24	





A.	$y = \ln(x) + 2$	B.	$y = 4 - x^2$	C.	$y = 2 \sin(x)$
D.	$y = \frac{1}{x^2}$	E.	$y =  x $	F.	$y = \sqrt{x^2 - 4}$
G.	$y = e^x$	H.	$y = \ln x $	I.	$y = x^4$
J.	$y =  x^2 - 1 $	K.	$y = \begin{cases} 2 & \text{for } x < 0 \\ x^2 + 2 & \text{for } 0 < x < 1 \\ 4 & \text{for } 1 < x < 2 \end{cases}$	L.	$y = \frac{8}{4 - x^2}$
M.	$y = \sqrt{4 - x^2}$	N.	$y = e^{-x}$	O.	$y = \sin^2(x^2) + \cos^2(x^2)$
P.	$y = x^3 - 6x^2 + 9x + 6$	Q.	$y = 1 - x^2$	R.	$y = 2x - 1$
S.	$y = x^2 - 2$	T.	$y = \frac{x^2 - 3}{2x - 4}$	U.	$y =  x + 1  - 1$
V.	$y = \frac{x}{x - 1}$	W.	$y = \cos(x)$	X.	$Y =  \ln(x) $

## GRAPH RECOGNITION LAB—ANSWER KEY

GRAPH	EQUATION		GRAPH	EQUATION
1	K		13	P
2	B		14	N
3	E		15	R
4	C		16	M
5	L		17	T
6	H		18	O
7	D		19	Q
8	J		20	S
9	G		21	V
10	A		22	X
11	F		23	W
12	I		24	U

### Notes:

1. Graph Recognition Lab from The TICAP (Technology Intensive Calculus for Advanced Placement) Project  
Project reproduction is permitted for face-to-face instructional purposes.
2. Changes to lab by Carol Hynes ([hynesc@comcast.net](mailto:hynesc@comcast.net))
  - Graphs and equations redone using Efofex Software—[www.efofex.com](http://www.efofex.com)
  - Sorting activities added