1. Consider the following level curves. Answer the questions below.

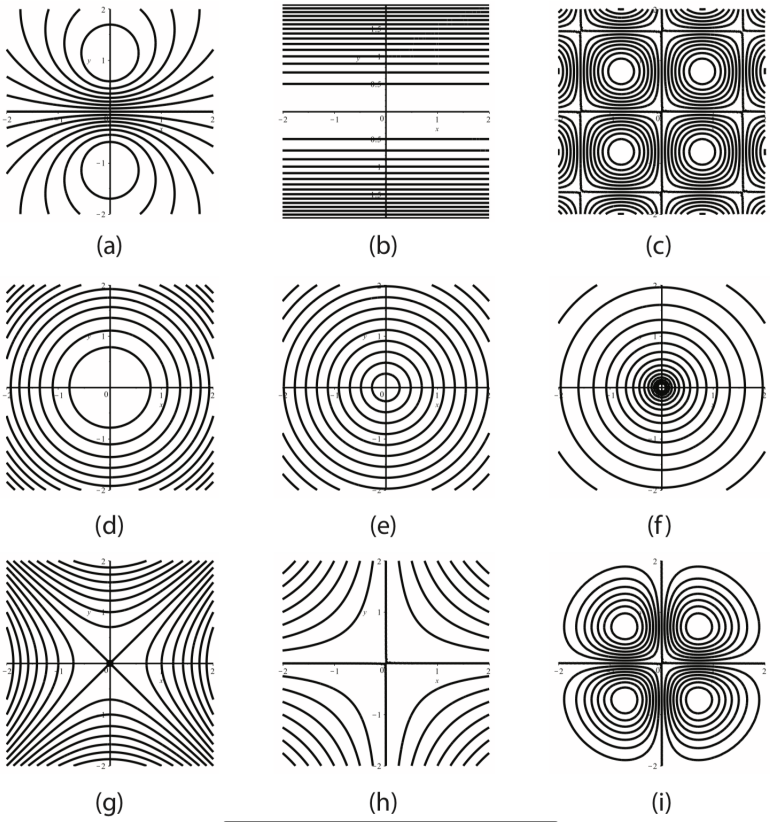


Figure 1:

(a) [2 pts] Which picture represents the level curves of $f(x, y) = y^2$ _____

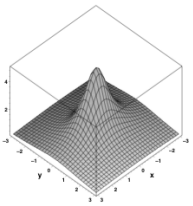
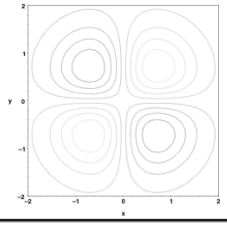
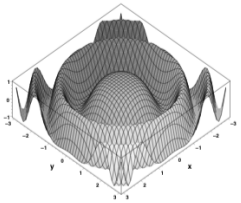
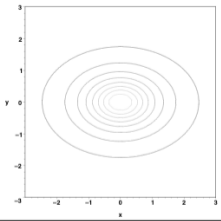
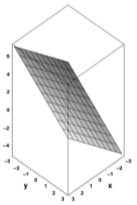
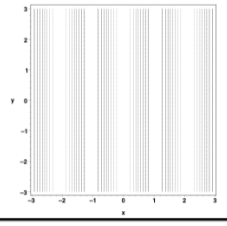
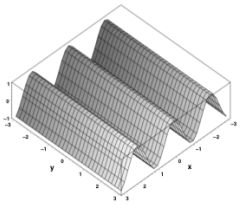
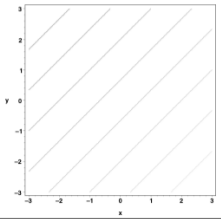
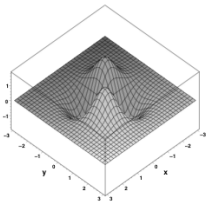
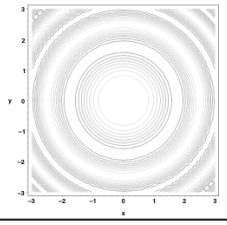
(b) [2 pts] Which picture represents the level curves of $f(x, y) = \sin(2x)\sin(2y)$? _____

(c) [2 pts] Which picture represents the level curves of $f(x, y) = xy$? _____

(d) [2 pts] Which picture represents the level curves of $f(x, y) = \sqrt{x^2 + y^2}$? _____

(e) [2 pts] Which picture represents the level curves of $f(x, y) = (x^2 + y^2)^2$? _____

2. [10 pts] Consider the table of functions, graphs, and level curves shown below.

(a) $f(x,y) = \cos(x^2 + y^2)$	(I)		(A)	
(b) $f(x,y) = 10xye^{-x^2-y^2}$	(II)		(B)	
(c) $f(x,y) = \cos(3x)$	(III)		(C)	
(d) $f(x,y) = \dfrac{5}{x^2 + 2y^2 + 1}$	(IV)		(D)	
(e) $f(x,y) = x - y + 1$	(V)		(E)	

By filling in the table below, correctly match these functions, graphs, and level curves.

Function	**Graph**	**Level Curves**