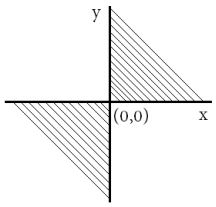
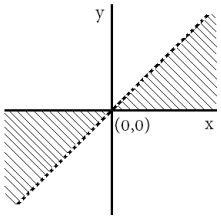
1

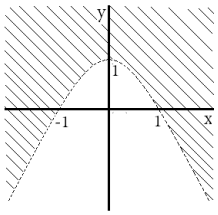
b) $D = (x, y) : |x^2 - y^2| \neq 0, xy > 0$



4. a) $D = (x, y) : \frac{x}{y} > 1$



b) $D = (x, y) : x^2 + y - 1 > 0, y \neq 0$
$D = (x, y) : y > 1 - x^2, y \neq 0$



6. a) $D = (x, y, z) : \frac{|x+y+z-4|}{3} \leqslant 1 = (x, y, z) : 1 \leqslant |x + y + z| \leqslant 1$

The region is between and on the parallel planes $x+y+z = 1$, $x + y + z = 1$

b) $D = (x, y, z) : z - x^2 - y^2 > 0, y \neq 0$

The region is inside the parabaloid $z = x^2 + y^2$ excluding the plane $y = 0$.

8. a) 2, b) 0

10. a) 1, b) 1

12. a) independent, b) dependent

14. a) discontinous b) discontinous