IMPLICIT FUNCTION

Implicit Function:- An equation f (x,y) = o defines y implicitly as a function of x. The domain of that implicitly defined consists of those x for which there is a unique y such that f (x , y)=o

Question: Find $\frac{dy}{dx}$

1. $X^2y - xy^2 + x^2 + y^2 = o$
2. $X^2 - xy + y^2 = 3$
3. $Xy + x - 2y - 1 = o$
4. $X^3y + xy^3 = 2$
5. $X + xy + y = 2$
6. $X^3 - 3xy + y^3 = 1$
7. $X^2 - y^2 - x = 1$
8. $X^3 + y^3 - 6x^2y = o$
9. $5y + 2x - y^3 - x^2y = o$
10. $2y + 5x + x^4 - x^3y^2 = 0$
11. $X^2 + 4xy - 16y^2 = 27$
12. $X^2 - 4xy + y^2 = 0$
13. $3x^2 + 7xy + 9y^2 = 6$
14. $(x^2+y^2)^2 - (x^2 - y^2) = 0$
15. $X^3 + y^3 = 3xy$
16. $X^n + y^n = a^n$
17. $X^2 + y^2 - 3x + 4y + 3 = 0$
18. $X^2y + 3xy^3 - x = 3$
19. $X^3y^2 - 5x^2y + x = 1$
20. $1/y + 1/z = 1$
21. $X^2 = x + y/x - y$
22. $\sqrt{x} + \sqrt{y} = 8$
23. $\sqrt{xy} + 1 = y$

24. $(x^2 + 3y^2)^{35} = x$
25. $xy^{2/3} + yx^{2/3} = x^2$
26. $3xy = (x^3 + y^2)^{3/2}$
27. $X^2y - 5xy^2 + 6 = 0$
28. $X^{2/3} - y^{2/3} - y = 1$
29. $Y^2 - x + 1 = 0$
30. $e^{xy} - x + y^2 = 1$
31. $xy = 8$
32. $y^2 + x^2y = 1$
33. $1 - y/1 + y = x$
34. $Y^2 + 3xy + x^2 = 4$
35. $3x^2 - 4y^2 = 7$
36. $X^3y^3 - 4 = 0$
37. $2xy - y^2 = 3$
38. $X^2y^3 = 5$
39. $x/y^2 = 3yx$
40. $x^2/\sqrt{y} = 0$
41. $x^2\sqrt{y} = 0$
42. $Y^2/x = 5$
43. $xe^y = x$
44. $xy = e^y$
45. $xy = e^x$
46. $Cosx = e^y$
47. $\tan x = xe^y$
48. $\sin y = xe^x$
49. (2005)KB. $x\sqrt{1+y} + y\sqrt{1+x} = 3$
50. $e^x \ln y = \sin^{-1} y$ (2004 K.B. 97/96
51. $\sqrt{x^2} + y^2 = \text{in } (x^2 - y^2)$ K.B.
52. $2x^2 + 3xy + 7y^2 - 2x + 4y + 9 = 0$ K.B.(2002)
53. $x^y . y^x = 5$ (2000) K.B.
54. $e^x \ln y = \sin^{-1} (xy)$ 1997/2004/1996