

$$7.12. 2x^2 \frac{dy}{dx} = y.$$

$$7.13. x^2 \frac{dy}{dx} + y - a = 0.$$

$$7.14. xy = (a+x)(b+y) \frac{dy}{dx}.$$

$$7.15. x - y^2 + 2xy \frac{dy}{dx} = 0.$$

Wskazówka (do zad. 7.15). Zrobić podstawienie $y = \sqrt{xt}$.

$$7.16. x\sqrt{1+y^2} + y\sqrt{1+x^2} \frac{dy}{dx} = 0.$$

$$7.17. 1 + y^2 - (y + \sqrt{1+y^2})(\sqrt{1+x^2})^3 \frac{dy}{dx} = 0.$$

$$7.18. \frac{dy}{dx} = xy + ax + by + ab.$$

$$7.19. x \frac{dy}{dx} + 1 = x^3 - \frac{dy}{dx}.$$

$$7.20. x^2 + \left(\frac{dy}{dx}\right)^2 = 1.$$

$$7.21. x \left[1 + \left(\frac{dy}{dx}\right)^2 \right] = 1.$$

$$7.22. \frac{dy}{dx} - x = 1 - x^2 \frac{dy}{dx}.$$

$$7.23. x^3 y + y + xy^3 \frac{dy}{dx} - x \frac{dy}{dx} = 0.$$

$$7.24. (1+x^2) \frac{dy}{dx} - \sqrt{1-y^2} = 0.$$

$$7.25. (1+x)y + (1-y)x \frac{dy}{dx} = 0.$$

$$7.26. \sin x \sin y \frac{dy}{dx} = \cos x \cos y.$$

$$7.27. \sin x \cos y - \cos x \sin y \frac{dy}{dx} = 0.$$

$$7.28. e^{-1/x} y^3 + x^2 y^2 \frac{dy}{dx} = 0.$$

$$7.29. e^y (1+x^2) \frac{dy}{dx} - 2x(1+e^y) = 0.$$

$$7.30. \frac{dy}{dx} = \frac{x}{y} \cdot \frac{1+x}{1+y}$$

$$7.31. y - x \frac{dy}{dx} = 1 + x^2 \frac{dy}{dx}.$$

$$7.32. (x^2+1)y^3 + (1-y^2)x^3 \frac{dy}{dx} = 0.$$

$$7.33. (1-x^2) \frac{dy}{dx} + 1 - y^2 = 0.$$

$$7.34. (x-1)(y^2-y+1) - (y+1)(x^2+x+1) \frac{dy}{dx} = 0.$$

$$7.35. x(1+e^y) - e^y \frac{dy}{dx} = 0.$$

$$7.36. (1+y^2) \left(e^{2x} - e^y \frac{dy}{dx} \right) - (1+y) \frac{dy}{dx} = 0.$$

$$7.37. \frac{dy}{dx} = \cos y.$$

$$7.38. \frac{dy}{dx} = \sin y.$$