

DERIVATE PARZIALI

$$1) \quad x + y = \frac{d}{dx} = 1 \quad ; \quad \frac{d}{dy} = 1$$

$$2) \quad 3x + 2y = \frac{d}{dx} = 3 \quad ; \quad \frac{d}{dy} = 2$$

$$3) x \cdot y = \frac{d}{dx} = y ; \frac{d}{dy} = x$$

$$4) 2x \cdot y = \frac{d}{dx} = 2y ; \frac{d}{dy} = 2x$$

$$5) 3x \cdot 2y = \frac{d}{dx} = 6y ; \frac{d}{dy} = 6x$$

$$6) x^2 + y = \frac{d}{dx} = 2x ; \frac{d}{dy} = 1$$

$$7) x^2 + y^2 = \frac{d}{dx} = 2x ; \frac{d}{dy} = 2y$$

$$8) 2x^2 + 3y^2 = \frac{d}{dx} = 4x ; \frac{d}{dy} = 6y$$

$$9) x^2 \cdot y = \frac{d}{dx} = 2xy ; \frac{d}{dy} = x^2$$

$$10) x^2 \cdot y^2 = \frac{d}{dx} = 2xy^2 ; \frac{d}{dy} = 2x^2y$$

$$11) 2x^2 \cdot 3y^2 = \frac{d}{dx} = 12xy^2 ; \frac{d}{dy} = 12x^2y$$

$$12) \log x + \log y = \frac{d}{dx} = \frac{1}{x} ; \frac{d}{dy} = \frac{1}{y}$$

$$13) 6 \log x + 2 \log y = \frac{d}{dx} = \frac{6}{x} ; \frac{d}{dy} = \frac{2}{y}$$

$$14) \log x^2 + \log y = \frac{d}{dx} = \frac{2 \log}{x} ; \frac{d}{dy} = \frac{1}{y}$$

$$15) \log x^2 + \log y^2 = \frac{d}{dx} = \frac{2 \log}{x} ; \frac{d}{dy} = \frac{2 \log}{y}$$

$$16) 2 \log x^2 + 3 \log y^2 = \frac{d}{dx} = \frac{4 \log}{x} ; \frac{d}{dy} = \frac{6 \log}{y}$$

$$17) \log x \cdot \log y = \frac{d}{dx} = \frac{\log(y)}{x} ; \frac{d}{dy} = \frac{\log(x)}{y}$$

$$18) \log x^2 \cdot \log y^2 = \frac{d}{dx} = \frac{2 \log x \cdot \log y^2}{x} ; \frac{d}{dy} = \frac{2 \log x^2 \cdot \log y}{y}$$

$$19) 2 \log x^2 \cdot 3 \log y^2 = \frac{d}{dx} = \frac{12 \log(x) \cdot \log y^2}{x} ; \frac{d}{dy} = \frac{12 \log x^2 \cdot \log y}{y}$$

$$20) \sqrt{x} + \sqrt{y} = \frac{d}{dx} = \frac{1}{2\sqrt{x}} ; \frac{d}{dy} = \frac{1}{2\sqrt{y}}$$

$$21) 2\sqrt{x} + 3\sqrt{y} = \frac{d}{dx} = \frac{1}{\sqrt{x}} ; \frac{d}{dy} = \frac{3}{2\sqrt{y}}$$

$$22) \sqrt{x^3} + \sqrt{y^3} = \frac{d}{dx} = \frac{3\sqrt{x}}{2} ; \frac{d}{dy} = \frac{3\sqrt{y}}{2}$$

$$23) \sqrt{x} \cdot \sqrt{y} = \frac{d}{dx} = \frac{\sqrt{y}}{2\sqrt{x}} ; \frac{d}{dy} = \frac{\sqrt{x}}{2\sqrt{y}}$$

$$24) 2\sqrt{x} \cdot 3\sqrt{y} = \frac{dL}{dx} = \frac{3\sqrt{y}}{\sqrt{x}} ; \frac{dL}{dy} = \frac{3\sqrt{x}}{\sqrt{y}}$$

$$25) \sqrt{x^2} \cdot \sqrt{y^2} = \frac{dL}{dx} = y ; \frac{dL}{dy} = x$$

$$26) \sqrt{x^3} \cdot \sqrt{y^3} = \frac{dL}{dx} = \frac{3}{2}\sqrt{x} y^{\frac{3}{2}} ; \frac{dL}{dy} = \frac{3}{2}x^{\frac{3}{2}}\sqrt{y}$$

$$27) \log \sqrt{x} + \log \sqrt{y} = \frac{d}{dx} = \frac{1}{2x} \quad ; \quad \frac{d}{dy} = \frac{1}{2y}$$

$$28) 2 \log \sqrt{x} + 3 \log \sqrt{y} = \frac{d}{dx} = \frac{1}{x} \quad ; \quad \frac{d}{dy} = \frac{3}{2y}$$

$$29) \frac{1}{2} \log \sqrt{x} + \frac{1}{3} \log \sqrt{y} = \frac{d}{dx} = \frac{1}{4x} \quad ; \quad \frac{d}{dy} = \frac{1}{6y}$$

$$30) 2 \log \sqrt{x} \cdot 3 \log \sqrt{y} = \frac{d}{dx} = \frac{3 \log(y)}{2x} ; \frac{d}{dy} = \frac{3 \log(x)}{2y}$$

$$31) \frac{1}{3} \log \sqrt{x} \cdot \frac{1}{2} \log \sqrt{y} = \frac{d}{dx} = \frac{\log(y)}{24x} ; \frac{d}{dy} = \frac{\log(x)}{24y}$$

$$32) 2xy + y = \frac{d}{dx} = 2y ; \frac{d}{dy} = 2x + 1$$

$$33) \quad xy + 3y = \frac{d}{dx} = y \quad ; \quad \frac{d}{dy} = x + 3$$

$$34) \quad \frac{1}{2}xy + \frac{1}{3}y = \frac{d}{dx} = \frac{y}{2} \quad ; \quad \frac{d}{dy} = \frac{1}{6}(3x + 2)$$

$$35) \quad xy + 2y + 1 = \frac{d}{dx} = y \quad ; \quad \frac{d}{dy} = x + 2$$

$$36) x^2y + 2y^2 = \frac{d}{dx} = 2xy ; \frac{d}{dy} = x^2 + 4y$$

$$37) 2\sqrt{x} + y = \frac{d}{dx} = \frac{1}{\sqrt{x}} ; \frac{d}{dy} = 1$$

$$38) \ln x + y = \frac{d}{dx} = \frac{1}{x} ; \frac{d}{dy} = 1$$

$$39) (x+2)(y+1) = \frac{dL}{dx} = (y+1) ; \frac{dL}{dy} = (x+2)$$

$$40) x^2 + 3y^2 = \frac{dL}{dx} = 2x ; \frac{dL}{dy} = 6y$$

$$41) xy + 2x + 4y = \frac{dL}{dx} = y+2 ; \frac{dL}{dy} = x+4$$

$$42) x + \log y = \frac{d}{dx} = 1 \quad ; \quad \frac{d}{dy} = \frac{1}{y}$$

$$43) xy + x + e^y = \frac{d}{dx} = y + 1 \quad ; \quad \frac{d}{dy} = x + e$$

$$44) 5\sqrt{x} + y = \frac{d}{dx} = \frac{5}{2\sqrt{x}} \quad ; \quad \frac{d}{dy} = 1$$

$$45) x(y+1) = \frac{dL}{dx} = y+1 \quad ; \quad \frac{dL}{dy} = x$$

$$46) \frac{1}{x} + \frac{1}{y} = \frac{dL}{dx} = \frac{1}{x^2} \quad ; \quad \frac{dL}{dy} = \frac{1}{y^2}$$

$$47) \frac{1}{2}x + \frac{1}{3}y = \frac{dL}{dx} = \frac{1}{2} \quad ; \quad \frac{dL}{dy} = \frac{1}{3}$$

$$48) \sqrt{\log x} + \sqrt{\log y} = \frac{d}{dx} = \frac{1}{2x\sqrt{\log(x)}} ; \frac{d}{dy} = \frac{1}{2y\sqrt{\log(y)}}$$

$$49) \sqrt{\log x} \cdot \sqrt{\log y} = \frac{d}{dx} = \frac{\sqrt{\log(y)}}{2x\sqrt{\log(x)}} \cdot 1 = \frac{\sqrt{\log(y)}}{2x\sqrt{\log(x)}} ; \frac{d}{dy} = \frac{\sqrt{\log(x)}}{2y\sqrt{\log(y)}}$$

$$50) (x+5)^2 \cdot (y+2)^2 = \frac{d}{dx} = 2(x+5)(y+2)^2 ; \frac{d}{dy} = 2(x+5)^2 \cdot (y+2)$$

$$51) 100 \ln(x+5) + 10 \ln y^2 = \frac{d}{dx} = \frac{100}{x+5} \cdot \frac{d}{dy} = \frac{20 \log(y)}{y}$$

$$52) xy + x + y + 2 = \frac{d}{dx} = y + 1 ; \quad \frac{d}{dy} = 1 + x$$

$$53) -x^2 - 16y = \frac{d}{dx} = -2x ; \quad \frac{d}{dy} = 16$$

$$54) \quad 3x + 6xy + 12y = \frac{d}{dx} = 6y + 3; \quad \frac{d}{dy} = 6(x + 2)$$

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