

# 常见函数的梯度

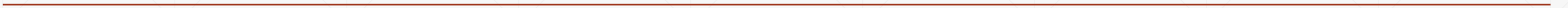
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主讲：龙良曲

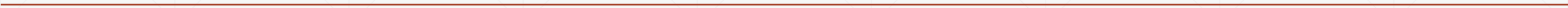
# Common Functions

Common Functions	Function	Derivative
Constant	$c$	$0$
Line	$x$	$1$
	$ax$	$a$
Square	$x^2$	$2x$
Square Root	$\sqrt{x}$	$(\frac{1}{2})x^{-\frac{1}{2}}$
Exponential	$e^x$	$e^x$
	$a^x$	$\ln(a) a^x$
Logarithms	$\ln(x)$	$1/x$
	$\log_a(x)$	$1 / (x \ln(a))$
Trigonometry (x is in <a href="#">radians</a> )	$\sin(x)$	$\cos(x)$
	$\cos(x)$	$-\sin(x)$
	$\tan(x)$	$\sec^2(x)$

$$xw + b$$



$$xw^2 + b^2$$



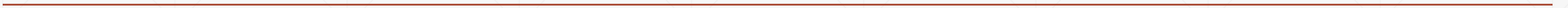
$$xe^w + e^b$$



$$[y - (xw + b)]^2$$



$$y \log(xw + b)$$



# 下一课时

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激活函数及其梯  
度



**Thank You.**

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