

HOW CAN TWO LUMBERJACKS CHOP TREES IN PERFECT SYNCHRONIZATION?

Find the derivative of each function and match with the result.

1) $y = \ln(x)$	2) $y = \ln(3x)$	3) $y = 3\ln(x)$	4) $y = \ln(x^2)$
5) $y = \frac{1}{2}\ln(2)$	6) $y = \ln(e^x)$	7) $y = \frac{1}{x}$	8) $y = \ln(x^3)$
9) $y = \frac{1}{2}\ln(x)$	10) $y = x\ln(e)$	11) $y = 1 - \ln\left(\frac{1}{x}\right)$	12) $y = \ln^2(x)$
13) $y = \ln\sqrt{x}$	14) $y = x\ln(x)$	15) $y = \sqrt{x} \ln(x)$	16) $y = \frac{1}{x}\ln(x)$
17) $y = \ln(x^2 - 4)$	18) $y = \ln\left(\frac{x}{x+1}\right)$	19) $y = \ln(\ln(x))$	

Derivatives.

A. $y' = -\frac{1}{x^2}$	B. $y' = \ln(x)$	C. $y' = e^x$	E. $y' = \frac{2}{x}$	G. $y' = \frac{3}{x}$
H. $y' = \frac{1}{x}$	I. $y' = 0$	J. $y' = \frac{1}{x^2}$	K. $y' = x$	L. $y' = 1$
M. $y' = \frac{1}{x^2+x}$	N. $y' = \frac{2x}{x^2-4}$	O. $y' = \frac{1}{x\ln(x)}$	R. $y' = \frac{1}{2x}$	T. $y' = \frac{2\ln(x)}{x}$
U. $y' = \frac{\sqrt{x}}{x} + \frac{1}{2\sqrt{x}}\ln(x)$		W. $y' = \ln(x) + 1$		Y. $y' = \frac{1}{x^2}(1 - \ln(x))$

14	5	12	1

17	7	12	15	9	7	6

10	19	3	8	4	9

13	2	16	12	11	18