WHY WAS THE CALCULUS STUDENT CONFUSED ABOUT $y = e^x$ AND THE DERIVATIVE OF $y = e^x$?

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

1) $y = e^{2x}$	2) $y = 2e^x$	3) $y = 2e^{2x} + 2$	4) $y = 2e^2$
5) $y = \frac{1}{2}e^{4x}$	6) $y = -e^{-x}$	7) $y = \frac{1}{2}e^{x^2}$	8) $y = -e^{1/x}$
9) $y = 2e^{\sqrt{x}}$	10) $y = xe^2$	11) $y = xe^x$	12) $y = \frac{1}{x}e^x$
13) $y = xe^x - e^x + 2$		14) $y = x^2e^x - xe^x$	
15) $y = \sqrt{x}\, e^{\sqrt{x}} + 1$		16) $y = (e^x - 1)^2$	

Derivatives.

A. $y' = 0$	B. $y' = e^2$	C. $y' = e^{-x}$	D. $y' = 2e^x$	E. $y' = xe^x$
F. $y' = 4e^{2x}$	H. $y' = 2e^{2x}$	I. $y' = 2e^{4x}$	J. $y' = e^x$	K. $y' = e^{x^2}$
L. $y' = xe^{x^2}$	M. $y' = \frac{1}{\sqrt{x}}e^{\sqrt{x}}$	N. $y' = \frac{1}{x^2}e^{1/x}$	O. $y' = 2e^{2x} - 2e^x$	
P. $y' = \sqrt{x}\, e^{\sqrt{x}} + \frac{1}{\sqrt{x}}e^{\sqrt{x}}$	R. $y' = \frac{1}{2}e^{\sqrt{x}} + \frac{1}{2\sqrt{x}}e^{\sqrt{x}}$	S. $y' = \frac{1}{x}e^x - \frac{1}{x^2}e^x$		
T. $y' = xe^x + e^x$	U. $y' = x^2e^x + xe^x - e^x$	Y. $y' = x^2e^x + xe^x + e^x$		

10	13	6	4	14	12	13

1	13

6	16	14	7	2	8

’

11

2	5	3	3	13	15	13	8	11	5	4	11	13

11	1	13	9