Calculus
F 24 February 2012

RESET THE SESSION

SET THE PARTICIPANT LIST

PLUG IN THE RECEIVER

Look at an unused file

Cover the look ahead

Topics covered are in bounds

Boxed answers agree with TurningPoint answers

Points agree with TurningPoint points

Points total to 100

QUIZ
FOLLOWS

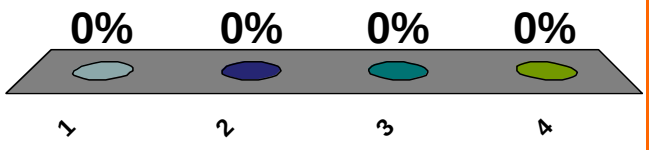
$$\lim_{x \to 0} \frac{e^x - 1 - x}{x^2}$$

(a) ∞

(b) $\lim_{x \to 0} \frac{e^x - 1}{2x}$

(c) DNE

(d) none of the above



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21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

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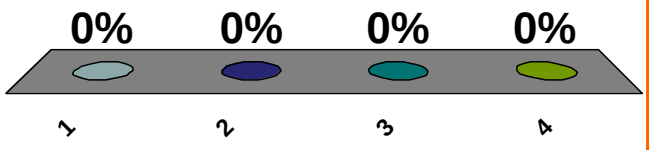

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Topic 0410

10 pts

$$\log_{10}(x) = \frac{\ln x}{\ln 10}$$

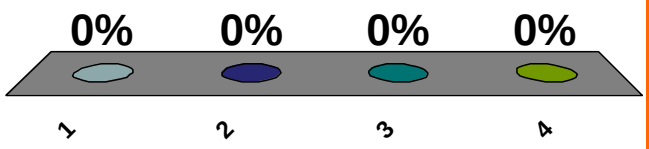
$$\frac{d}{dx}\left[\log_{10}(x)\right] \underset{x>0}{=} \text{??}$$

(a) $\dfrac{1/x}{\ln 10}$

(b) $\dfrac{1/x}{1/10}$

(c) $\dfrac{\ln x}{1/10}$

(d) none of the above



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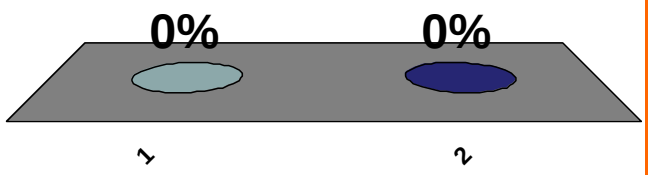
T or F:

$f' > 0$ on $(2, 3)$

$\Rightarrow$ f incr. on $(2, 3)$

(a) True

(b) False



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$$\frac{d}{dx}\left[7^{1/2}\right] = ??$$

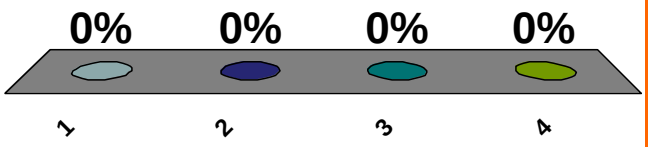
(a) DNE

(b) $[1/2]\left[7^{-1/2}\right]$

(c) $7^{1/2}(\ln 7)$

(d) none of the above

Correct answer: 0



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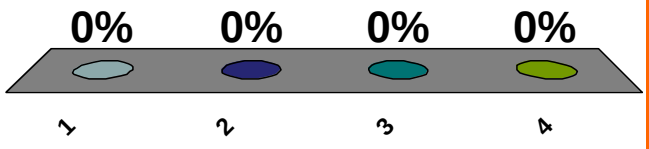
(a) $x(1+x^2)^{x-1}\left[\frac{d}{dx}(1+x^2)\right]$

$\frac{d}{dx}\left[(1+x^2)^x\right]$

(b) $x(2x)^{x-1}$

(c) $\left[(1+x^2)^x\right]\left[\frac{d}{dx}\left(x\cdot\ln\left(1+x^2\right)\right)\right]$

(d) none of the above



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Topic 0400

0 pts

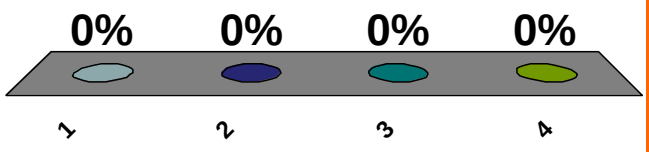
$(d/dx)(\ln|x|)$

(a) $1/x,\ x > 0$

(b) $|1/x|$

(c) $1/x$

(d) none of the above



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$$(d/dx)(\arctan x) = \frac{1}{1+x^2}$$

$$(d/dx)(\arctan e^x) = \text{??}$$

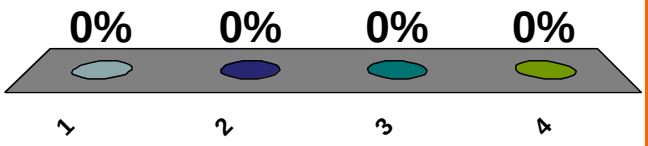
(a) $\dfrac{1}{1+(e^x)^2}$

(b) $(\operatorname{arcsec}^2 e^x)(e^x)$

(c) $\dfrac{1}{1-(e^x)^2}$

(d) none of the above

Correct answer: $\dfrac{e^x}{1+(e^x)^2}$



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LOOK AHEAD

derivs of x^n, la x, e^x, trig, inv. trig

antideriv/indef int. of x^n w.r.t. x

antideriv/indef int. of x^{-1} w.r.t. x

antideriv/indef int. of $\sin s$, $\cos s$ w.r.t. s

CURRENT (l'Hôpital)

$$\ln(1+x) \underset{x \to 0}{\sim} x$$

LOOK BACK

$(d/dx)[(1+x^2)^{x^3+x+1}]$

derivs w.r.t. x of exprs of y

$$\lim_{x \to -\infty} \left(\sqrt{x^2+3x} + x \right)$$

SAVE THE SESSION DATA

RETURN TO PRESENTATION