Calculus
W 13 February 2013

RESET THE SESSION

SET THE PARTICIPANT LIST

PLUG IN THE RECEIVER

Boxed answers agree with TurningPoint answers

Points agree with TurningPoint points

Points total to 100

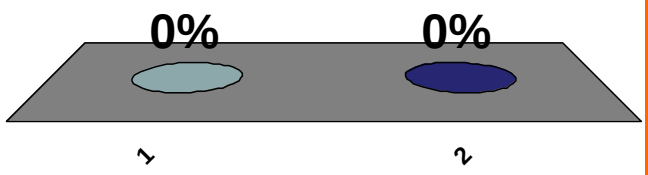
Topics covered are in bounds

QUIZ
FOLLOWS

$1 + 1 = ??$

(a) 1

(b) 2



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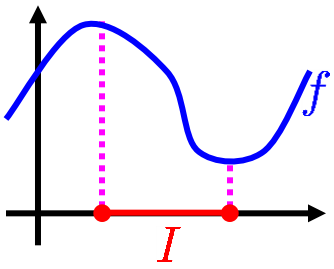
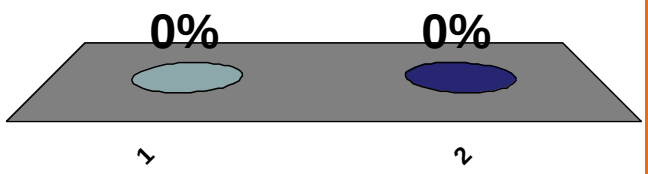


T or F:
f decr. on I

(a) True

(b) False



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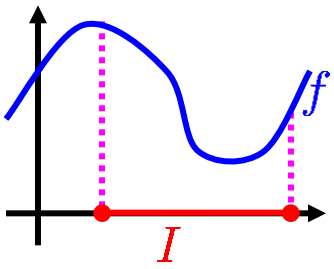
0 of 5

Topic 0290

20 pts



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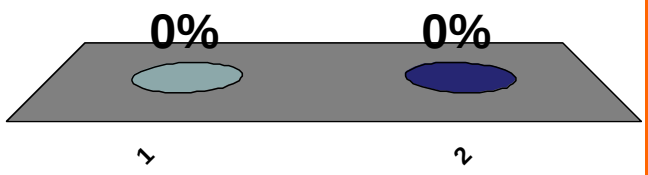

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Topic 0290

20 pts

$$f(x) = x^3, \quad f'(x) = 3x^2$$

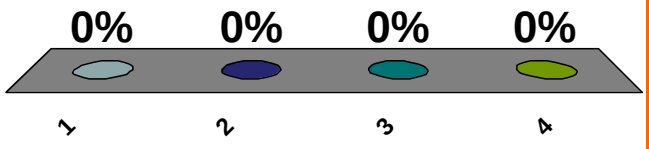
eq'n of tan. line at $(2\ ,\ 8)$

(a) $y - 2 = 3x^2(x - 8)$

(b) $y - 8 = 3x^2(x - 2)$

(c) $y - 8 = 12(x - 2)$

(d) none of the above



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Topic 0300

20 pts

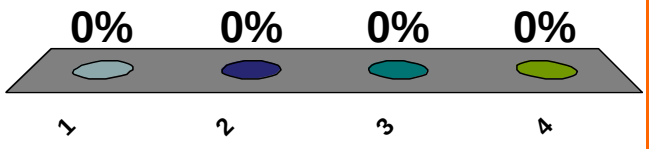
$f(1) = 200$
$f(3) = 800$
avg rate of change?

(a) $(800 - 200)/(3 - 1)$

(b) $(3 - 1)/(800 - 200)$

(c) $(200 - 800)/(3 - 1)$

(d) none of the above



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$$z = e^t + 4t^3$$

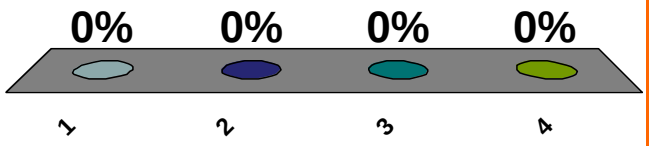
$$\triangle z = ??$$

(a) $\left[e^{t+(\triangle t)} + 4(t + (\triangle t))^3\right] + \left[e^t + 4t^3\right]$

(b) $\left[e^{t+(\triangle t)} - 4(t + (\triangle t))^3\right] + \left[e^t - 4t^3\right]$

(c) $\left[e^{t+(\triangle t)} + 4(t + (\triangle t))^3\right] - \left[e^t + 4t^3\right]$

(d) none of the above



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END
QUIZ

END
CLASS

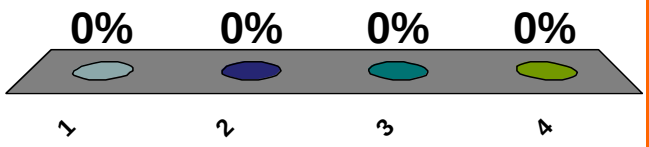
$\log_8(1) = ??$

(a) 0

(b) 1

(c) -1

(d) none of the above



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Topic 0260

0 pts

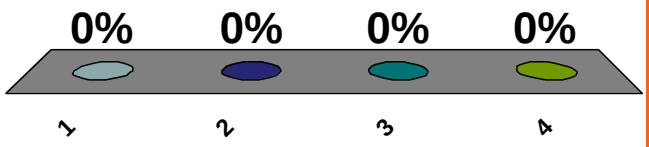
$$\lim_{t \to 0^+} \left[\frac{\sqrt{4t^6 + 9t^4}}{t(\sin t)} \right] = ??$$

(a) DNE

(b) ∞

(c) 3

(d) none of the above



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$$x - \sin x \underset{x \to 0}{\sim} x^3/6$$

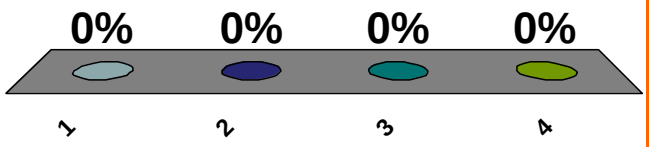
$$\lim_{x \to 0} \left[\frac{x^3 + x^4}{x - \sin x} \right] = ??$$

(a) DNE

(b) 6

(c) 1/6

(d) none of the above



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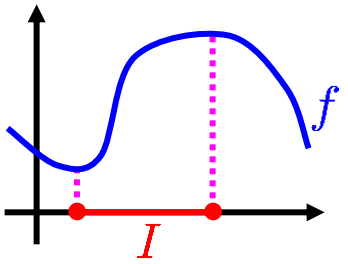

T or F:
f incr. on I

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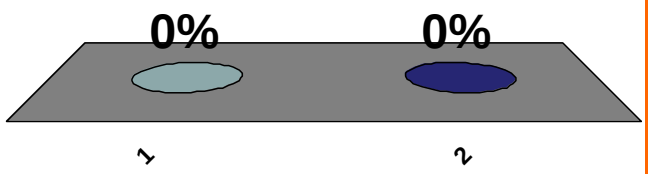
(b) False



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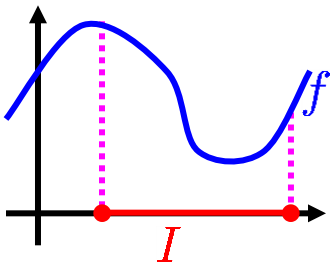
Topic 0290

0 pts



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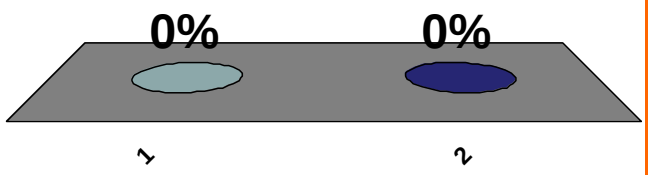

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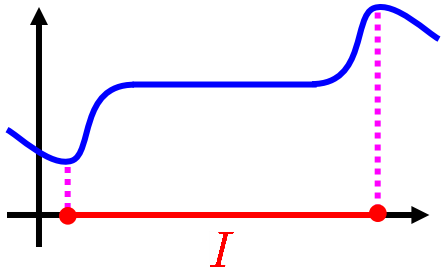
Topic 0290

0 pts



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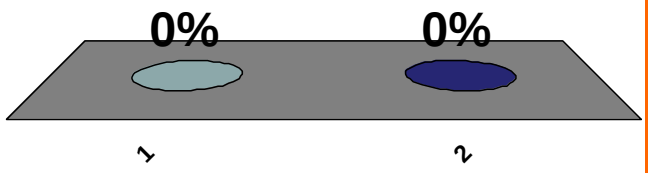

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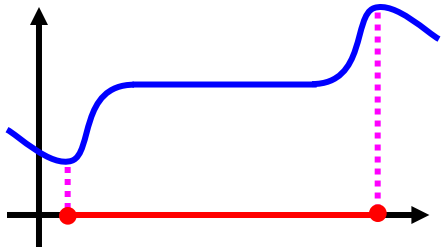
Topic 0290

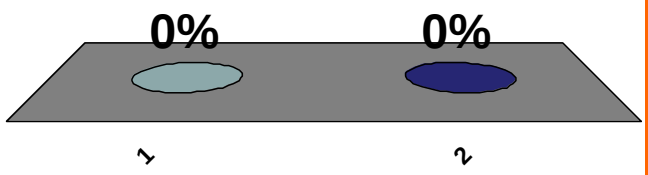
0 pts



T or F:
f nondecr. on I

(a) True

(b) False



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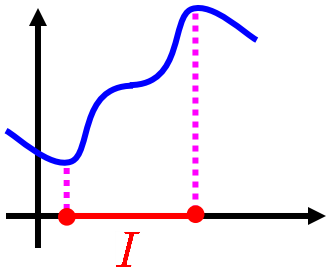
Topic 0290

0 pts



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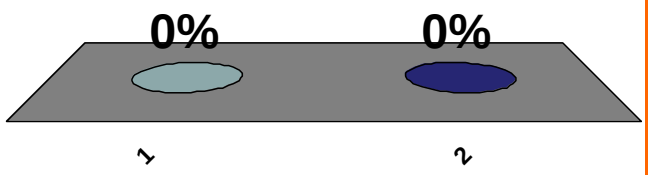

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Topic 0290

0 pts

$y = \sin x$

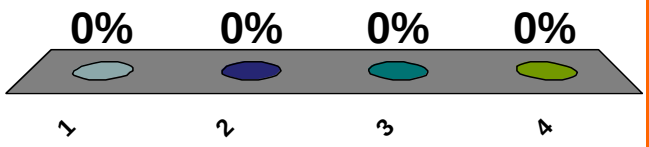
$\triangle y = ??$

(a) $[\sin(x + \triangle x)]$

(b) $[\sin(x + \triangle x)] - [\sin x]$

(c) $\dfrac{[\sin(x + \triangle x)] - [\sin x]}{\triangle x}$

(d) none of the above



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$$y = e^s$$

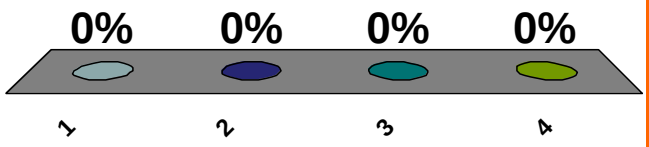
$$\triangle y = ??$$

(a) $e^{s+(\triangle s)} - e^s$

(b) $e^{s+(\triangle s)}$

(c) $\left(e^{s+(\triangle s)} - e^s\right)/(\triangle s)$

(d) none of the above



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$$y = e^x$$

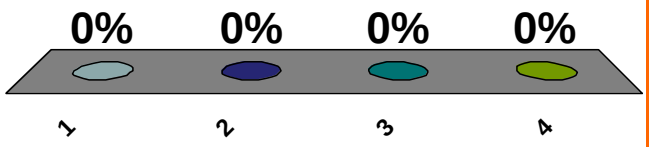
$$\triangle y = ??$$

(a) $e^{x+(\triangle x)} - e^x$

(b) $e^{x+(\triangle x)}$

(c) $\left(e^{x+(\triangle x)} - e^x\right)/(\triangle x)$

(d) none of the above



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$f(x) = x^6/6, \quad f'(x) = x^5$

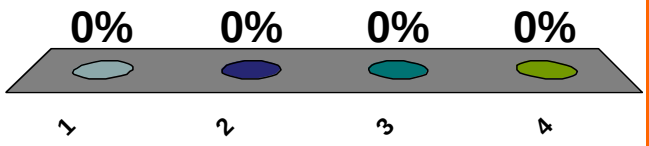
slope of tan. line at $(2\ ,\ 2^6/6)$

(a) $2^6/6$

(b) $(2^6/6)^5$

(c) 2^5

(d) none of the above



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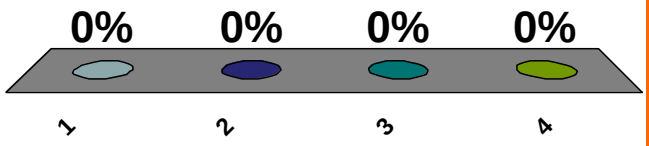
$f(1) = 200$
$f(3) = 800$
avg rate of change?

(a) $(200 - 800)/(1 - 3)$

(b) $(1 - 3)/(200 - 800)$

(c) $(800 - 200)/(1 - 3)$

(d) none of the above



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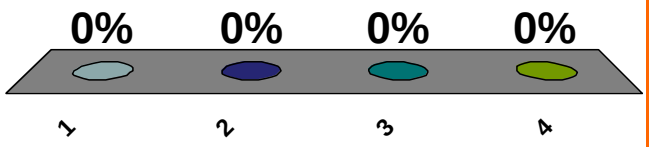
$\ln 1 = ??$

(a) 1

(b) 0

(c) -1

(d) none of the above



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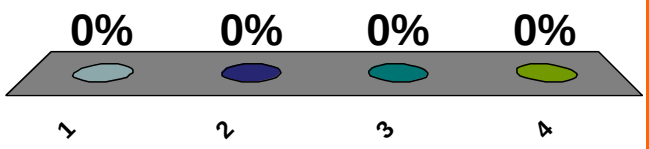
$\log_{10}(100) = ??$

(a) 0

(b) 1

(c) 2

(d) none of the above



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$\log_2(16) = ??$

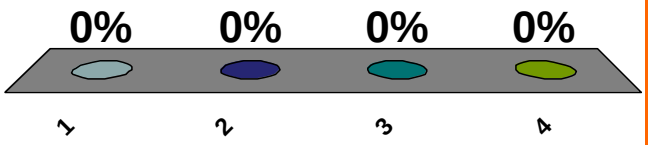
(a) 3

(b) 2

(c) 1

(d) none of the above

Correct answer: 4



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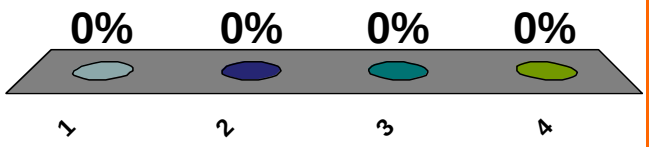
$\log_2(1) = ??$

(a) 0

(b) -1

(c) 1

(d) none of the above



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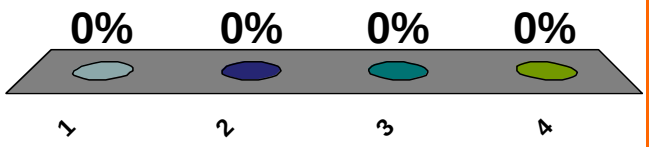
$2^0 = ??$

(a) 0

(b) -1

(c) 1

(d) none of the above



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$\ln 0 = ??$

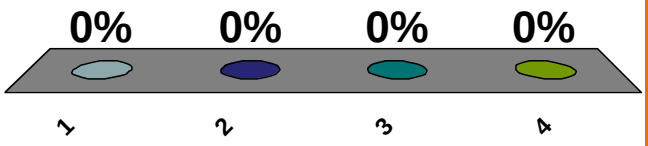
(a) 0

(b) -1

(c) 1

(d) none of the above

Correct answer: DNE



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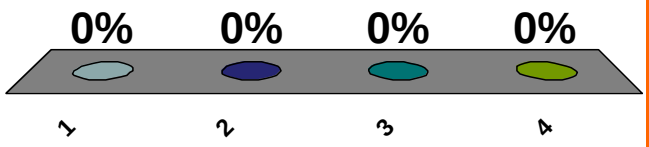
$\log_2(1) = ??$

(a) 0

(b) -1

(c) 1

(d) none of the above



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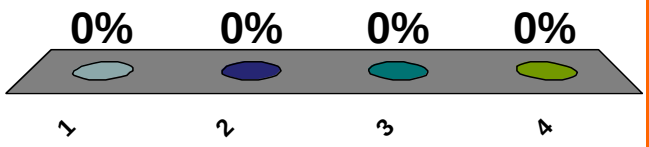
$$\ln(e^5) = ??$$

(a) -5

(b) 5

(c) $1/5$

(d) none of the above



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

0 of 5

Topic 0260

0 pts

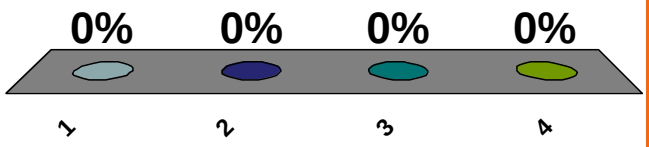
$\log_8(8) = ??$

(a) 0

(b) 1

(c) -1

(d) none of the above



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

$\log_{10}(0.01) = ??$

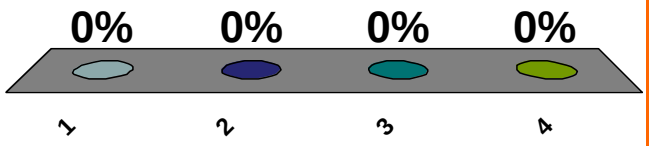
(a) 0

(b) 1

(c) -1

(d) none of the above

Correct answer: -2



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

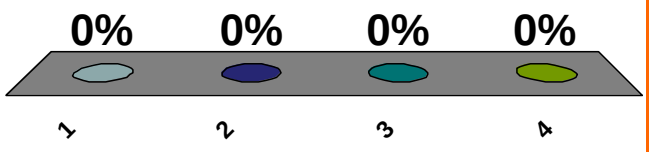
$$\sqrt{x^2+1} \quad \sim \quad ??$$
$$x \to \infty$$

(a) 1

(b) x

(c) $-x$

(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

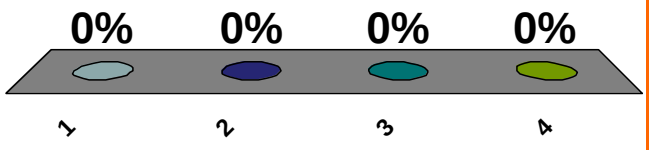
$$\sqrt{x^2+1} \underset{x \to -\infty}{\sim} \; ??$$

(a) 1

(b) x

(c) $-x$

(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

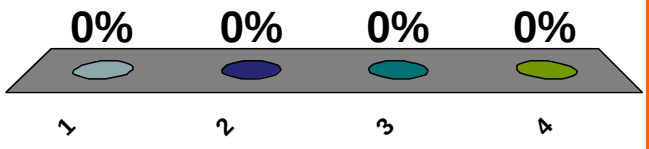
$$\lim_{x \to \infty} \left[\frac{\sqrt{x^2+1}}{3x} \right] = ??$$

(a) DNE

(b) 1/3

(c) $-1/3$

(d) none of the above



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

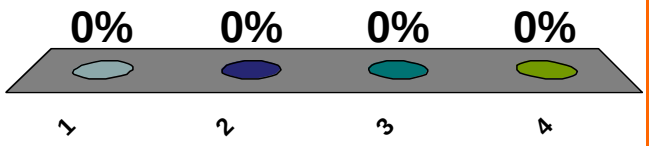
$$\lim_{x \to -\infty} \left[\frac{\sqrt{x^2+1}}{3x} \right] = ??$$

(a) DNE

(b) 1/3

(c) $-1/3$

(d) none of the above



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

SAVE THE SESSION DATA

RETURN TO PRESENTATION