

# Calculus

F 20 April 2012

RESET THE  
SESSION

SET THE  
PARTICIPANT  
LIST

PLUG IN THE  
RECEIVER

New topics (see diary)

Topics covered are in bounds

Boxed answers agree with  
TurningPoint answers

Points agree with  
TurningPoint points

Points total to 100

Cover the look ahead

QUIZ  
FOLLOWS

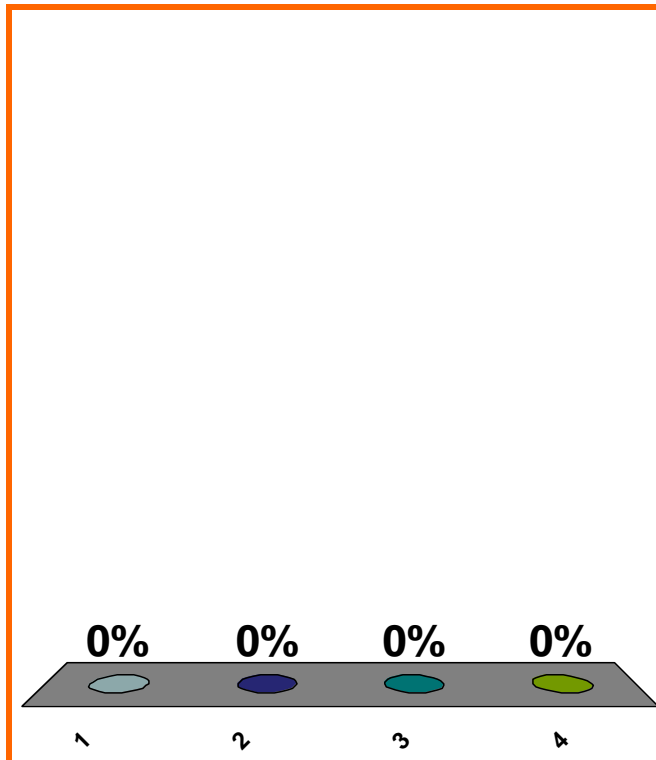
$$(a) \ 2\pi x \sqrt{1 - x^2} \, dx$$

$$(b) \ 2\pi x (1 - x^2) \, dx$$

$$(c) \ \pi (1 - x^2) \, dx$$

(d) none of the above

thickened shell vol. at  $x$   
 $y = \sqrt{1 - x^2}$   
about  $y$ -axis



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

$$F'(t) = e^{t^2}$$

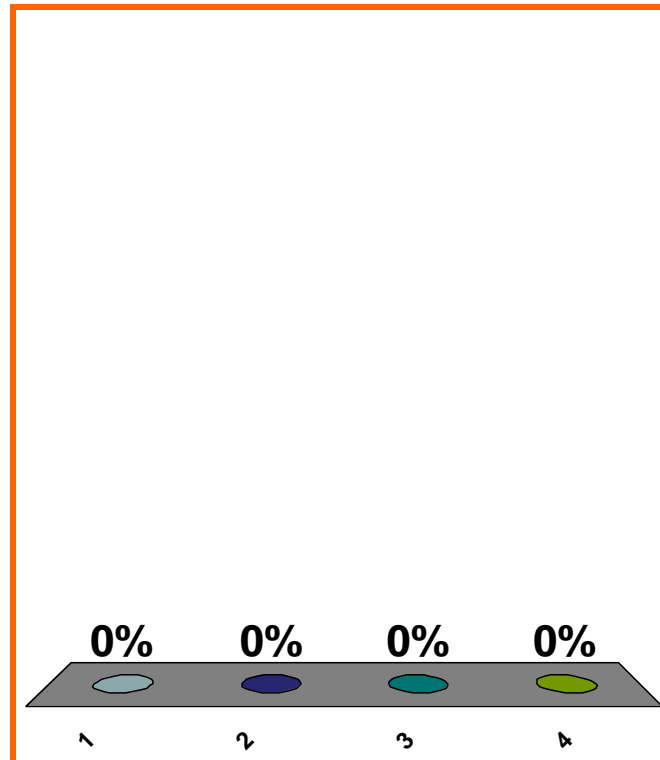
$$\frac{d}{dx} \left[ \int_{x^2}^{x^5} e^{t^2} dt \right]$$

(a)  $\frac{d}{dx} \left[ (F(x))^5 - (F(x))^2 \right]$

(b)  $\frac{d}{dx} \left[ (F(x^5))(5x^4) - (F(x^2))(2x) \right]$

(c)  $\frac{d}{dx} \left[ (F(x^5)) - (F(x^2)) \right]$

(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

$n$ th midpt Riem. sum

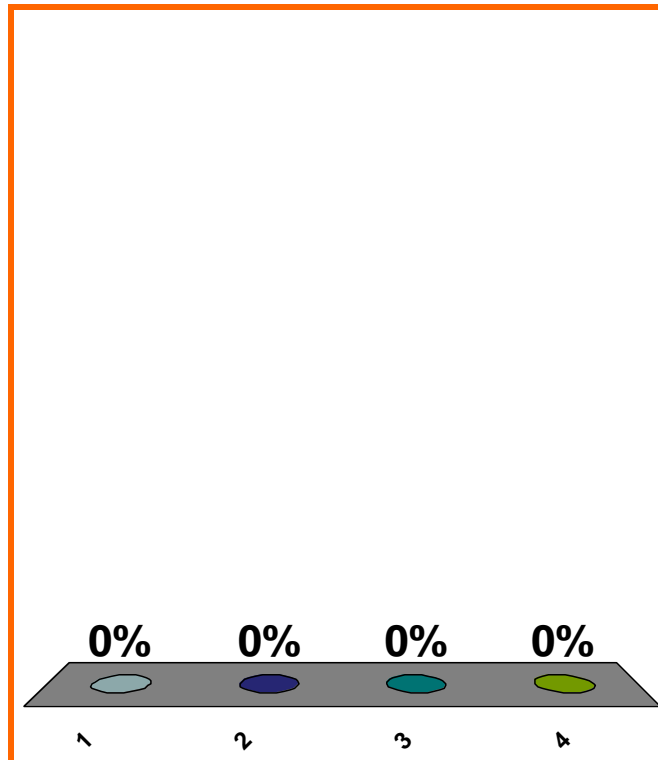
for  $\int_1^2 e^x dx$

(a)  $\sum_{j=1}^n \left[ \frac{1}{n} \right] \left[ e^{1+(j/n)} \right]$

(b)  $\sum_{j=1}^n \left[ \frac{1}{n} \right] \left[ e^{1+(j/n)-(1/(2n))} \right]$

(c)  $\sum_{j=1}^n \left[ \frac{1}{n} \right] \left[ e^{1+(j/n)-(1/n)} \right]$

(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

$$(a) \sum_{j=0}^{n-1} \left[ \frac{4}{n} \right] \left[ (2 + (4j/n))^5 \right]$$

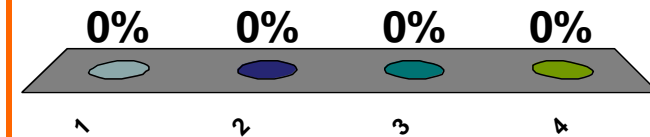
$n$ th midpt Riem. sum

$$\text{for } \int_2^6 x^5 dx$$

$$(b) \sum_{j=0}^{n-1} \left[ \frac{4}{n} \right] \left[ (2 + (4j/n) + (4/(2n)))^5 \right]$$

$$(c) \sum_{j=0}^{n-1} \left[ \frac{4}{n} \right] \left[ (2 + (4j/n) - (4/(2n)))^5 \right]$$

(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 0590

20 pts

8



# CURRENT (VOL OF SOLID OF REV)

disk and washer methods  
shell method

SAVE THE  
SESSION  
DATA

RETURN TO  
PRESENTATION