

# Calculus

W 23 January 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

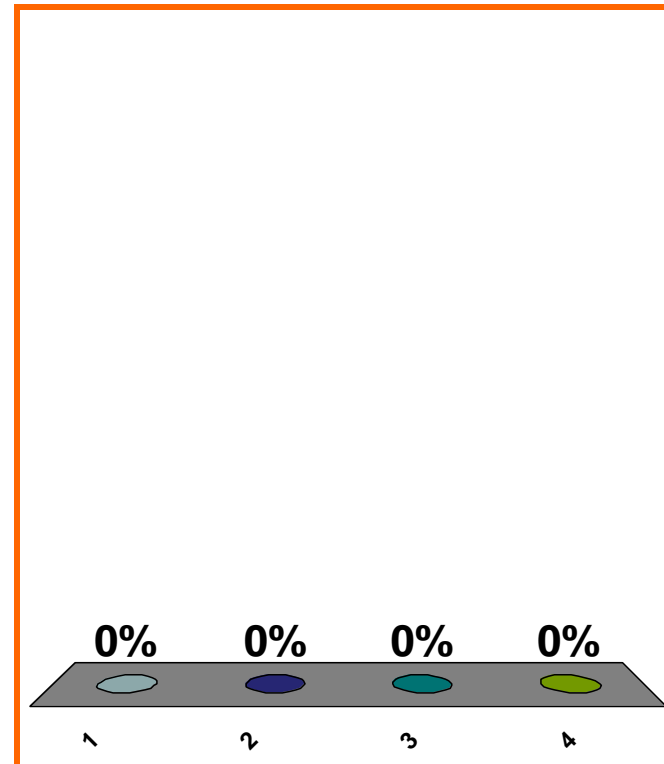
$$\frac{a/b}{c} = ??$$

(a)  $\frac{ab}{c}$

(b)  $\frac{a}{bc}$

(c)  $\frac{ac}{b}$

(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

precalc

0 pts

5

$$\frac{w + xy}{xz} = ??$$

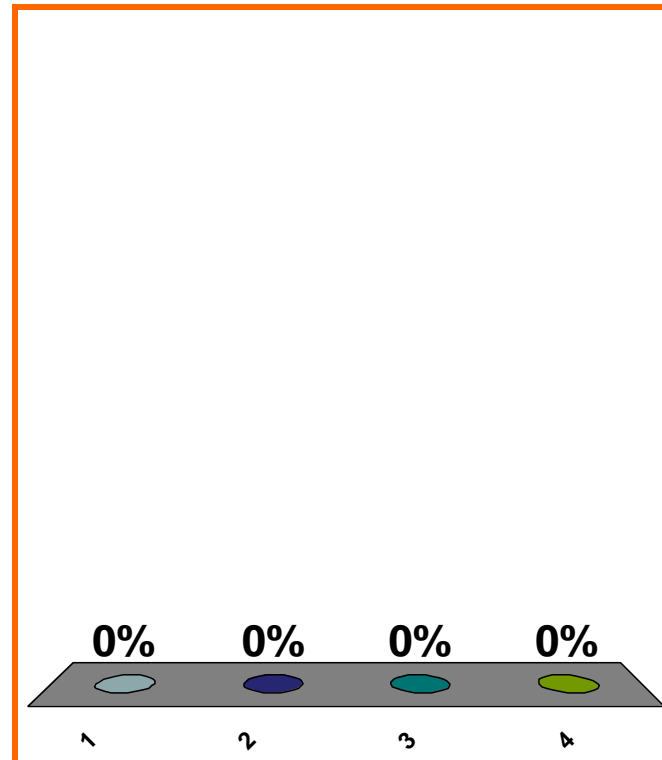
(a)  $\frac{w + y}{z}$

(b)  $\frac{w - y}{z}$

(c)  $\frac{y - w}{z}$

(d) none of the above

Correct answer: no simplification



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

precalc

0 pts

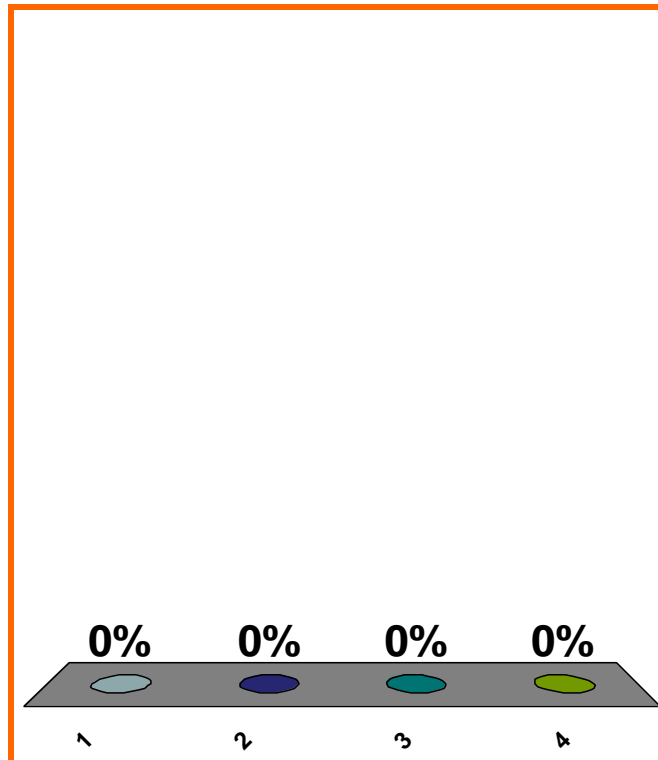
$$\frac{a + b}{c} = ??$$

$$(a) \frac{a}{c} + \frac{b}{c}$$

$$(b) \frac{a}{c} + b$$

$$(c) a + \frac{b}{c}$$

(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

precalc

0 pts

END  
CLASS



$$\ln(x + y) = ??$$

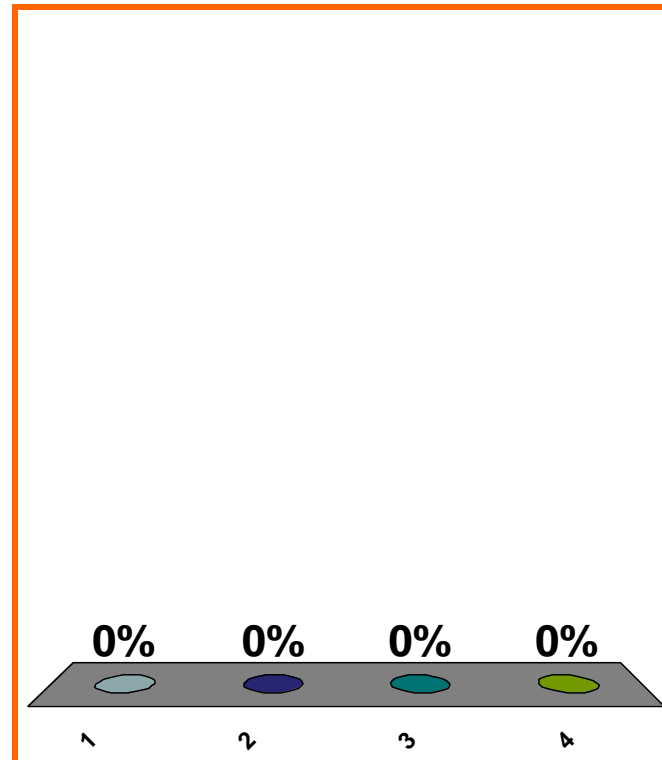
(a)  $(\ln x) + (\ln y)$

(b)  $(\ln x)(\ln y)$

(c)  $(\ln x) - (\ln y)$

(d) none of the above

Correct ans: no simplification



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

precalc

0 pts

$\pi$  radians = ?? degrees

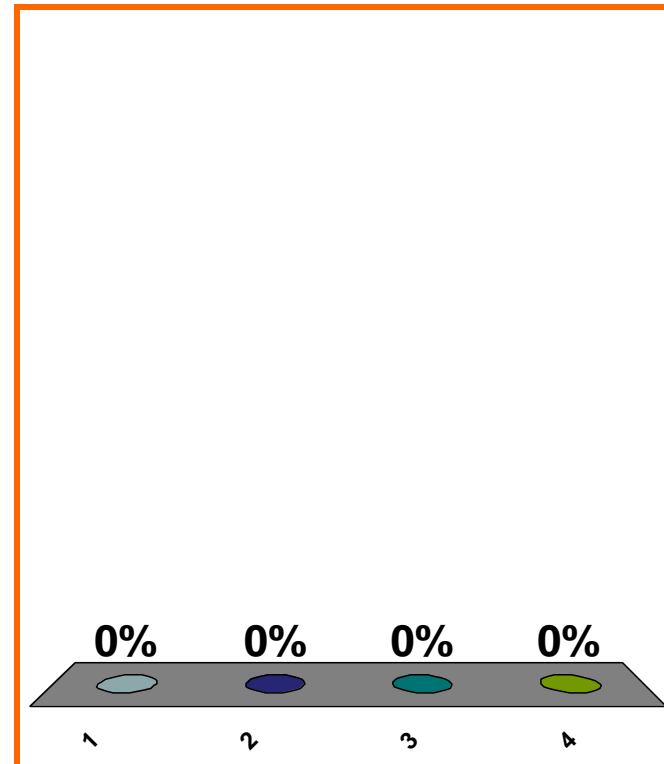
(a) 30

(b) 60

(c) 90

(d) none of the above

Correct answer: 180



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

precalc

0 pts

10

END  
QUIZ

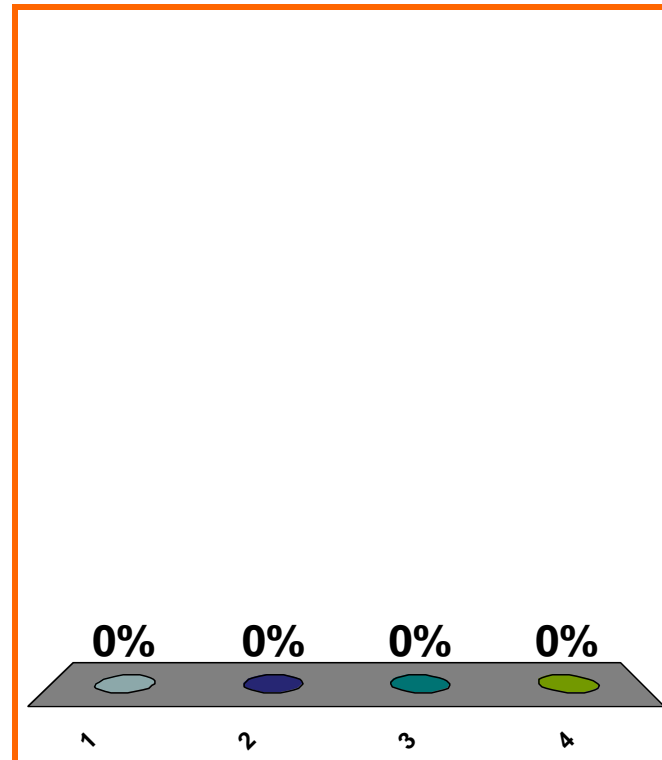
$$\cos(\pi) = ??$$

(a)  $-1$

(b)  $\sqrt{3}/2$

(c)  $\sqrt{2}/2$

(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

precalc

0 pts

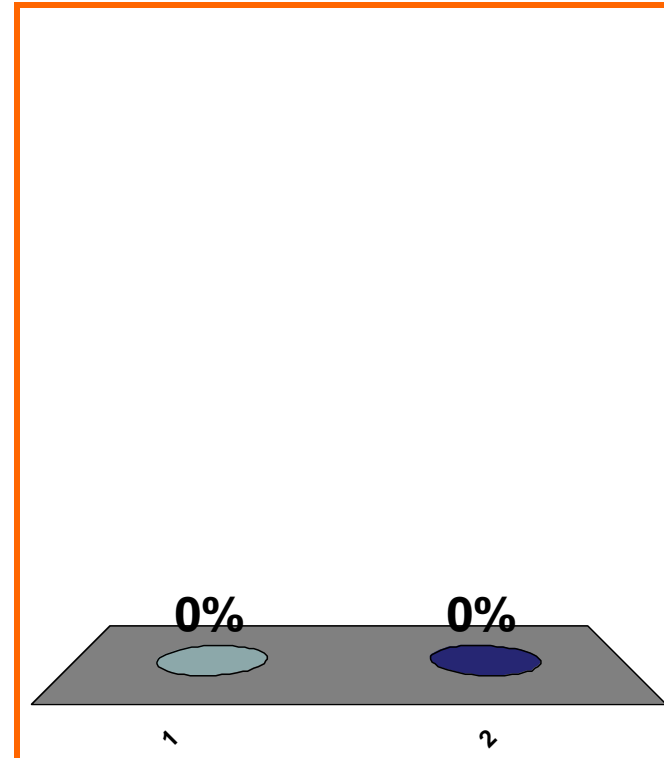
12

T or F:

$$\exists x \in \mathbb{Z} \text{ s.t. } x^2 = 2$$

(a) True

(b) False



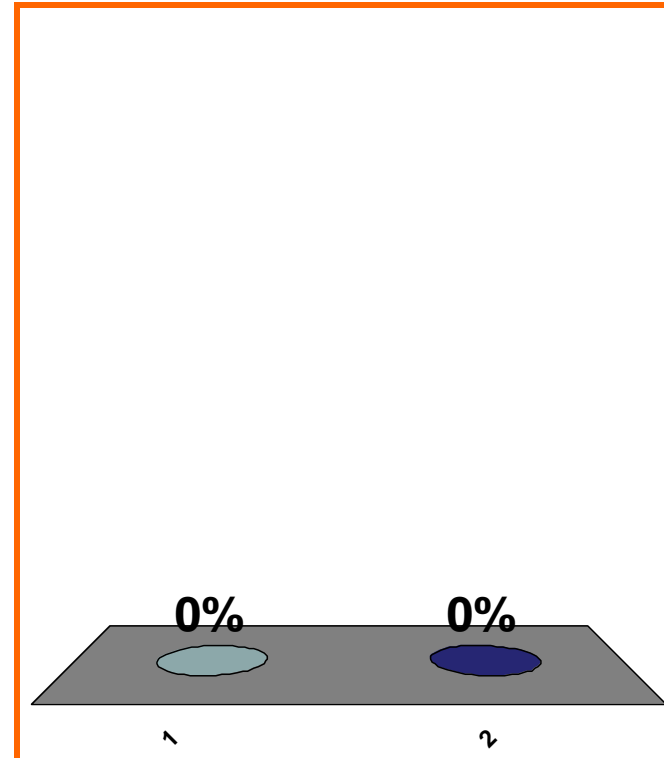
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21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

T or F:

$$\exists x \in \mathbb{Q} \text{ s.t. } x^2 = 2$$

(a) True

(b) False



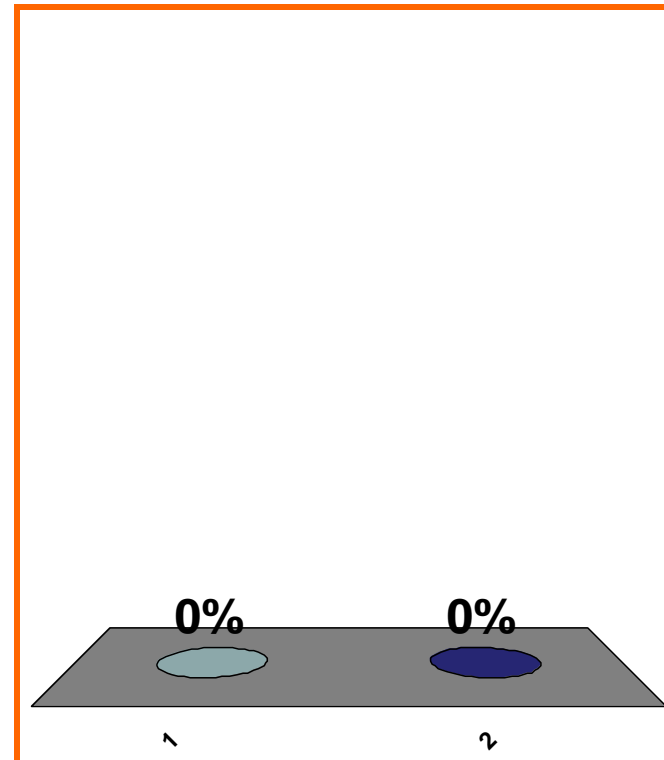
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21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

T or F:

$(-1, 1)$  is open

(a) True

(b) False



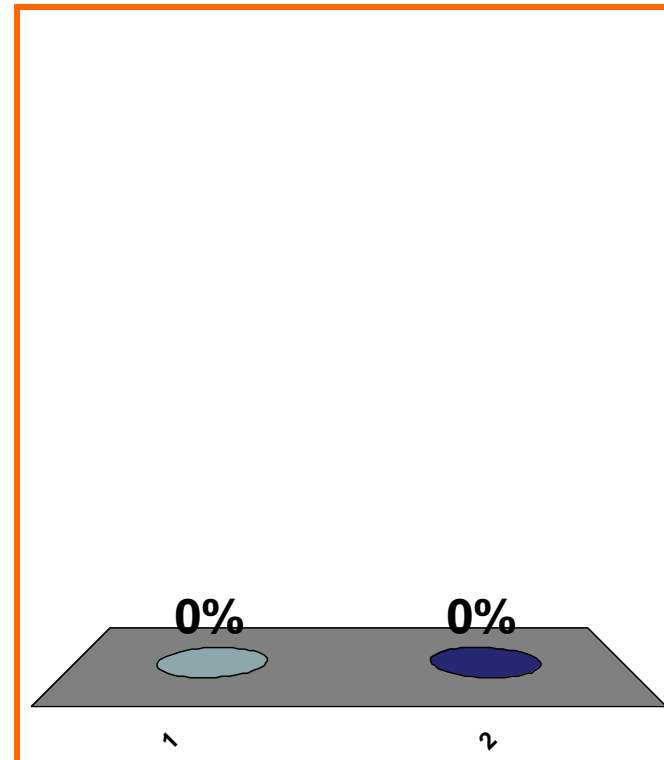
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21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

T or F:

$[-1, \infty)$  is closed

(a) True

(b) False



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

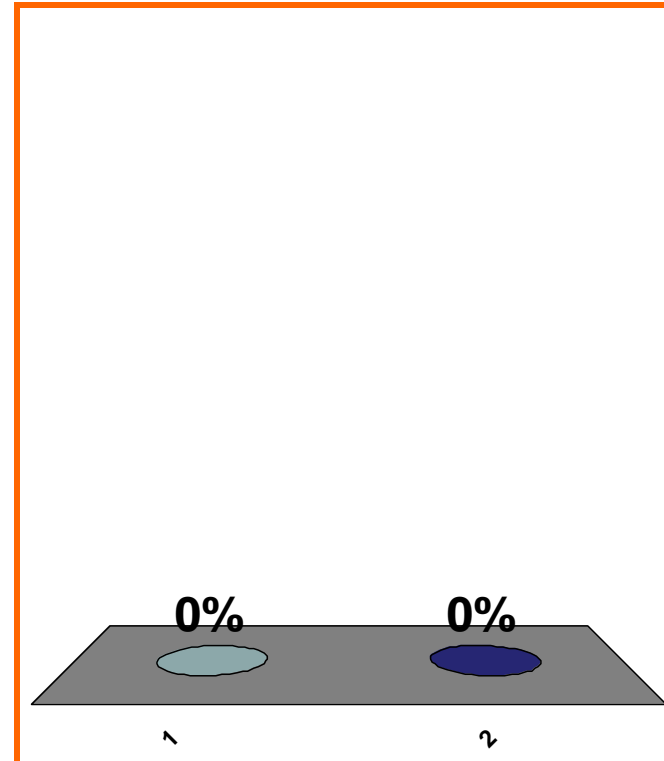


T or F:

$[-1, \infty)$  is compact

(a) True

(b) False



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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Domain of  $\sqrt{x}$  is ??

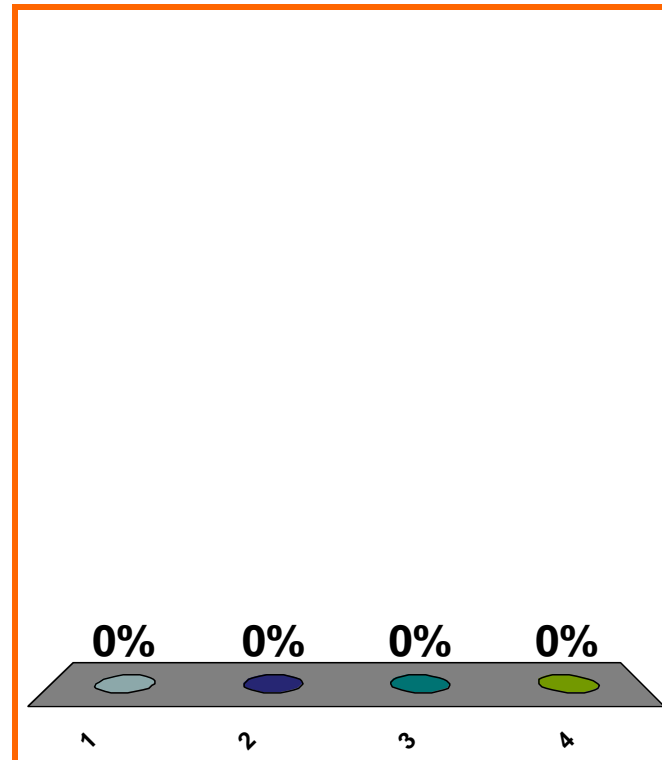
(a)  $x \in \mathbb{R}$

(b)  $x \in \mathbb{Q}$

(c)  $x \in (0, \infty)$

(d) none of the above

Correct answer:  $x \in [0, \infty)$



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

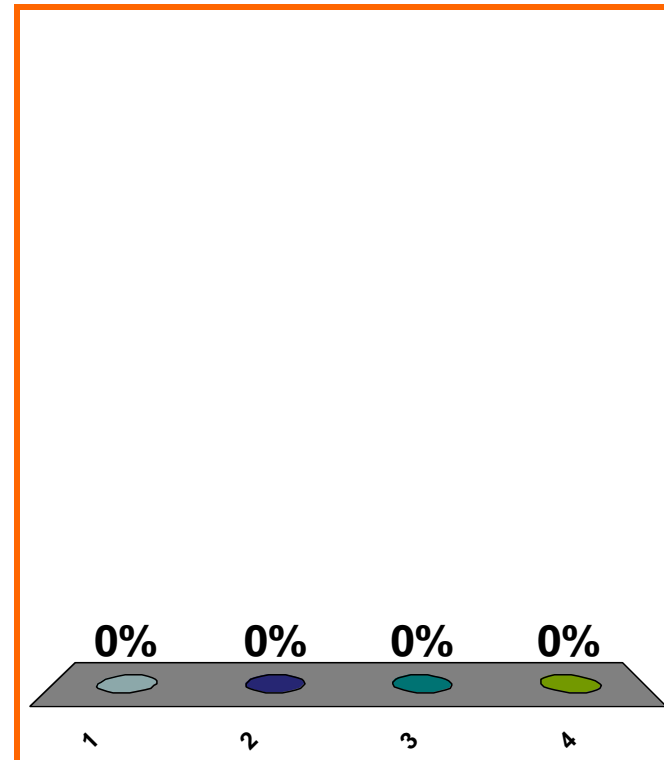
Which is a linear combination of  $1, x, x^2$ ?

(a)  $\sin x$

(b)  $2 + 8x + 7x^2$

(c)  $e^x$

(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

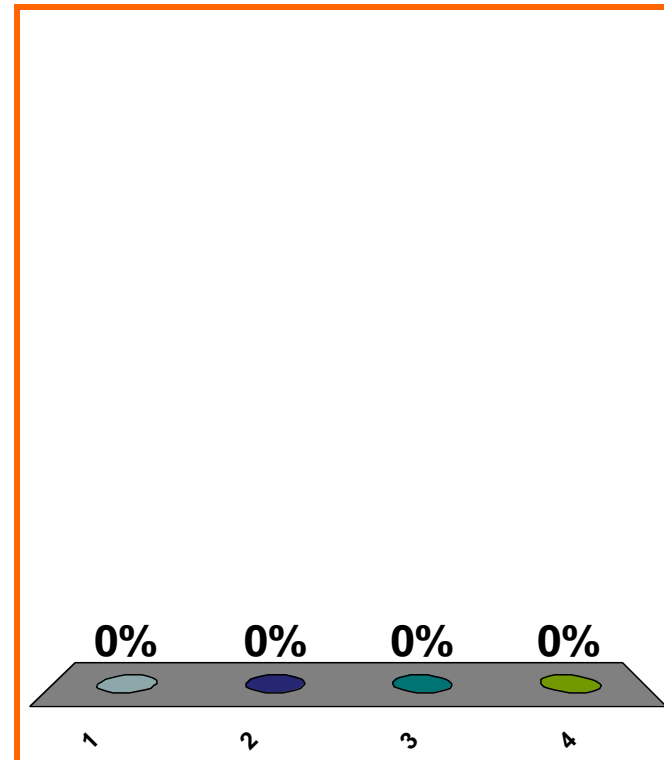
Which is a linear combination of  $1, x, x^2$ ?

(a)  $\sin x$

(b)  $2 - x$

(c)  $e^x$

(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

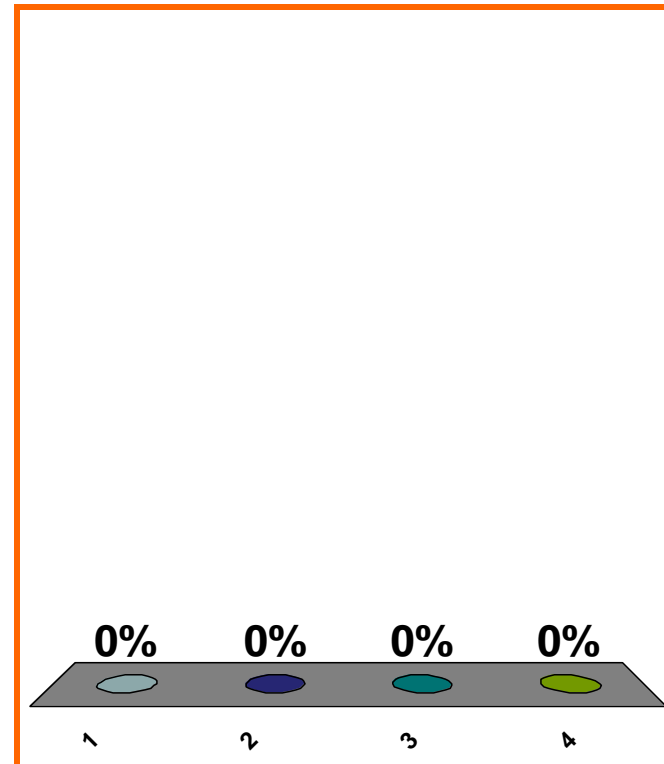
Quartic coefficient in  
 $3x^5 + x^4 - x^3 + 8x + \pi$

(a) 1

(b) 3

(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

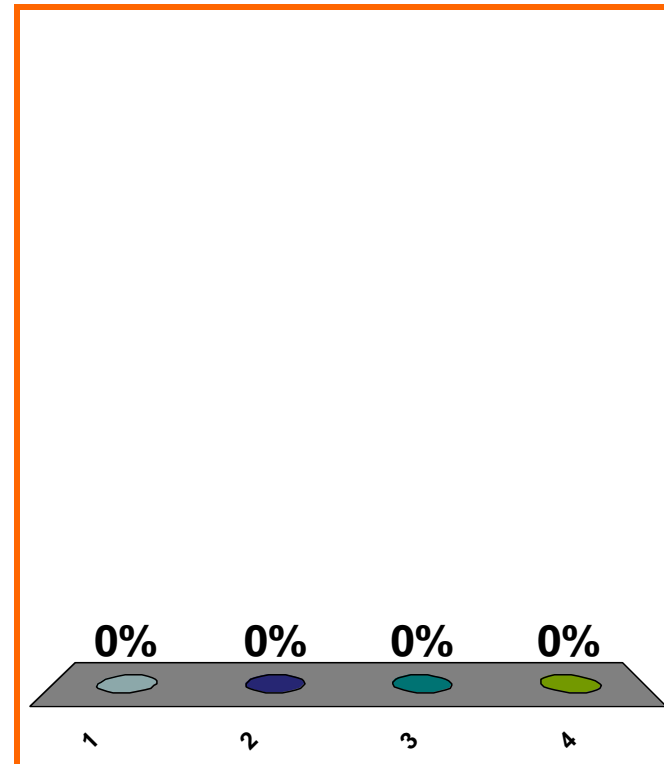
Leading coefficient in  
 $3x^5 + x^4 - x^3 + 8x + \pi$

(a) 1

(b) 3

(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

			1							
		1		1						
	1		2		1					
1		3		3		1				
	4		6		4		1			
		6		6		4		1		
			4		4		1			
				1						

$$(2x - y)^3 = ??$$

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

(b)  $8x^3 + y^3$

(c)  $8x^3 - 3(4x^2)y + 3(2x)y^2 - y^3$

(d) none of the above

0%

0%

0%

0%

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

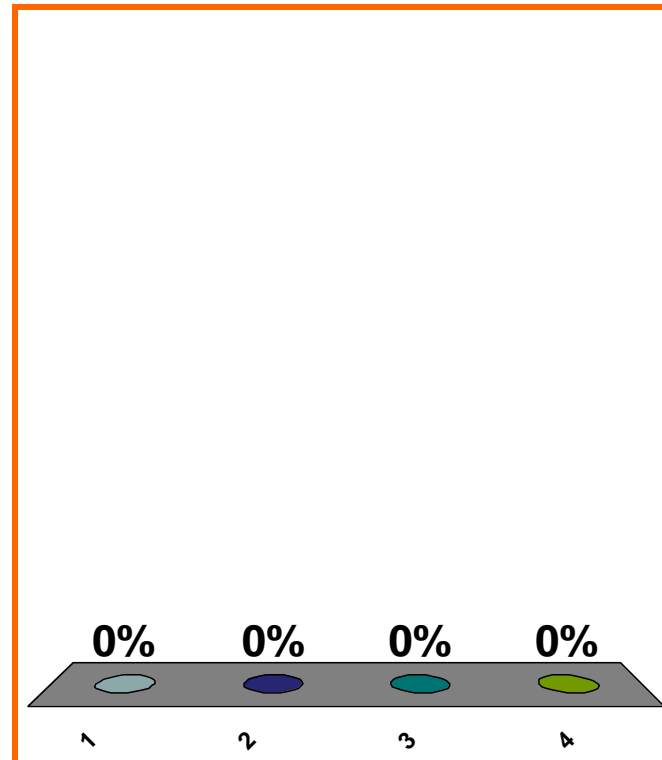
distance from 7 to 9?

(a) 2

(b) -2

(c) 4

(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



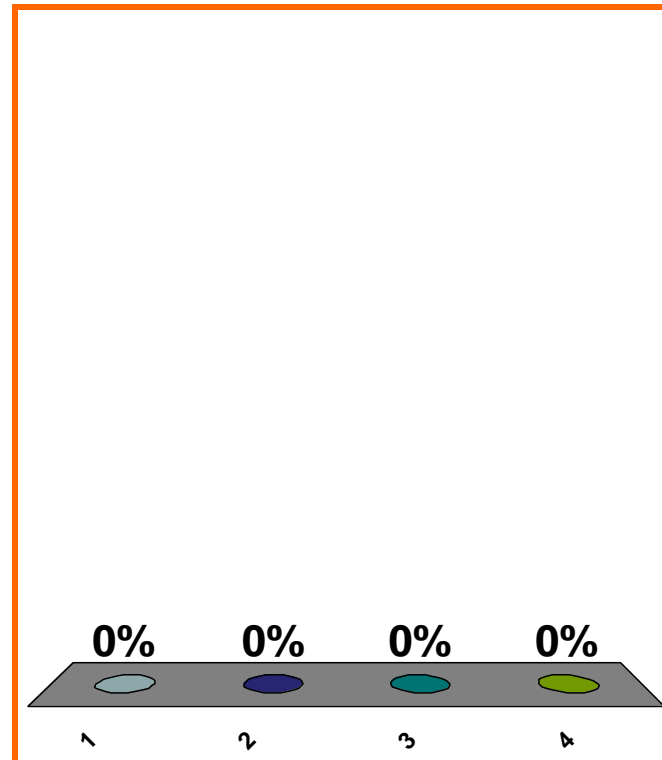
distance from 9 to 7?

(a) 2

(b) -2

(c) 4

(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

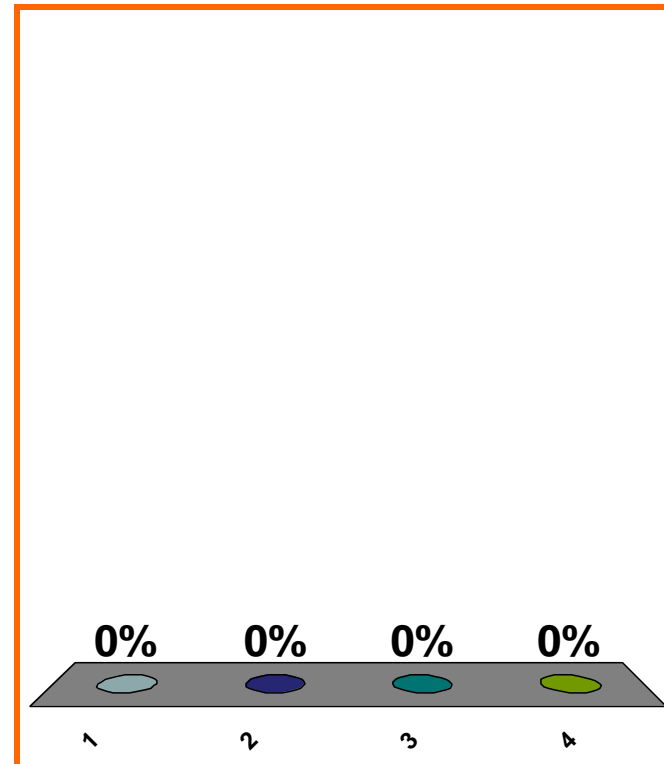
distance from  $x$  to 5?

(a)  $5 - x$

(b)  $|5 - x|$

(c)  $x - 5$

(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

distance from  $a$  to  $b$ ?

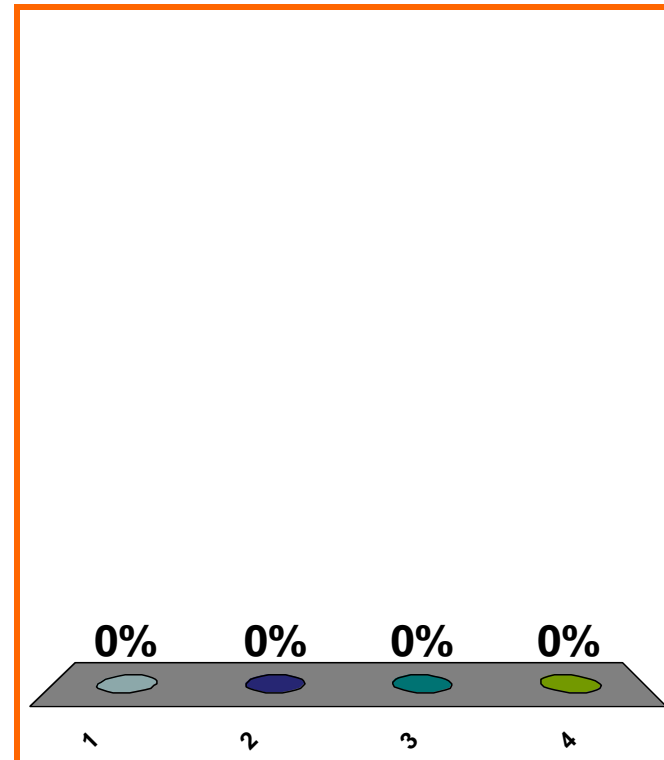
(a)  $a - b$

(b)  $b - a$

(c)  $a + b$

(d) none of the above

Correct answer:  $|a - b|$



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