Calculus
W 18 January 2012

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

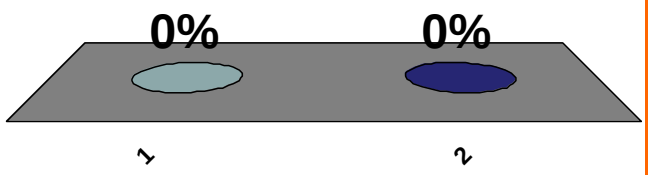
QUIZ
FOLLOWS

T or F:

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

(a) True

(b) False



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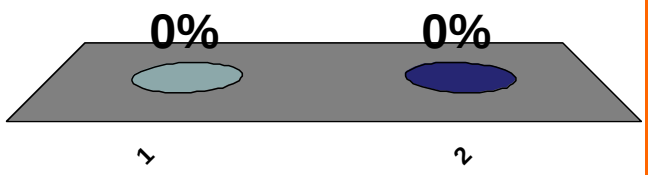
T or F:

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

(a) True

(b) False



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0 of 5

Topic 0010

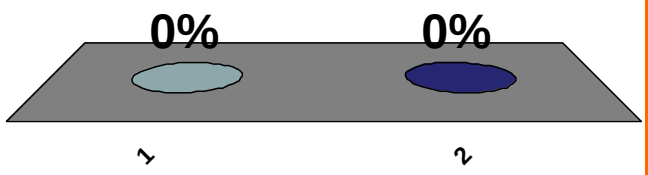
0 pts

T or F:

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

(a) True

(b) False



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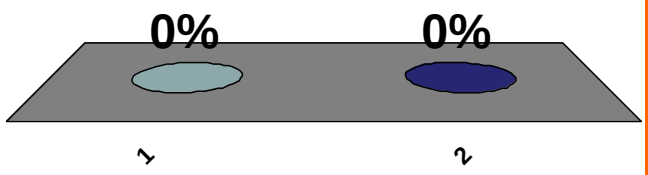
T or F:

$$\exists x \in \mathbb{R} \text{ s.t. } x^2 = -1$$

(a) True

(b) False



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Topic 0010

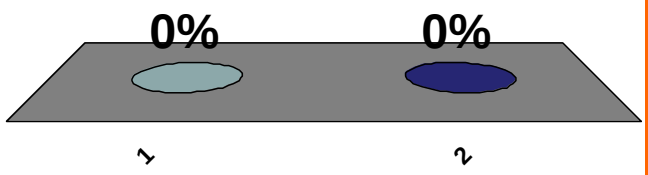
0 pts

T or F:

$$\forall x \in \mathbb{R},\ \sqrt{x^2} = x$$

(a) True

(b) False



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Topic 0050

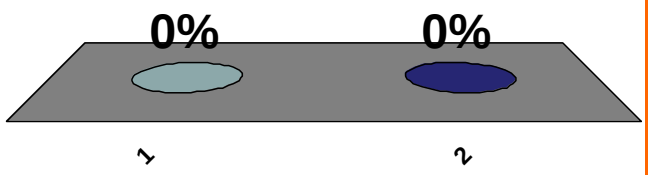
0 pts

T or F:

$$\forall x \in \mathbb{R},\ \sqrt{x^2} = |x|$$

(a) True

(b) False



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Topic 0050

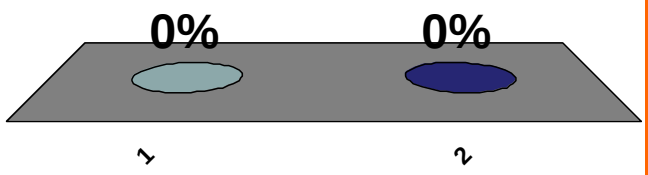
0 pts

T or F:

$(-1, 1)$ is open

(a) True

(b) False



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0 of 5

Topic 0010

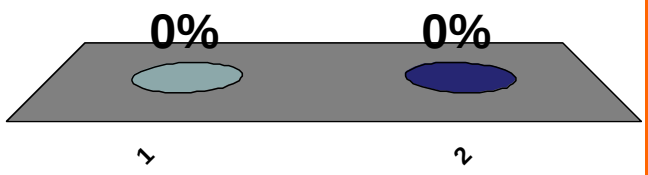
0 pts

T or F:

$[-1, \infty)$ is closed

(a) True

(b) False



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0 of 5

Topic 0010

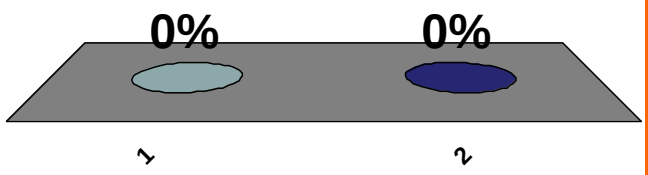
0 pts

T or F:

$[-1, \infty)$ is compact

(a) True

(b) False



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Domain of $\sqrt{x}$ is ??

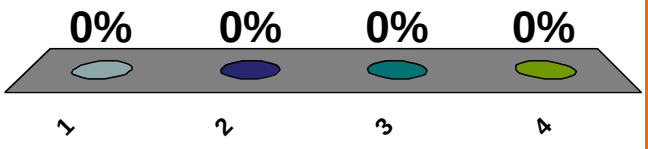
(a) $x \in \mathbb{R}$

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

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

(d) none of the above

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



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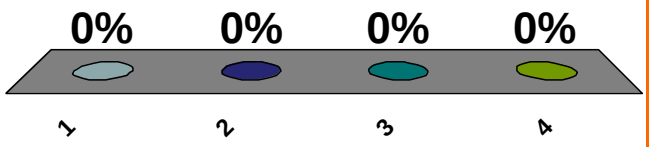
Which is a linear combination of $1, x, x^2$?

(a) $\sin x$

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

(c) e^x

(d) none of the above



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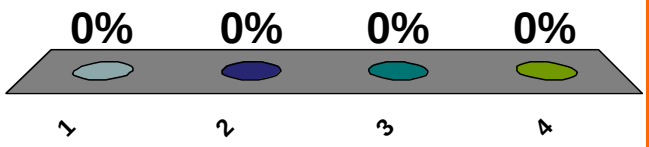
Which is a linear combination of $1, x, x^2$?

(a) $\sin x$

(b) $2 - x$

(c) e^x

(d) none of the above



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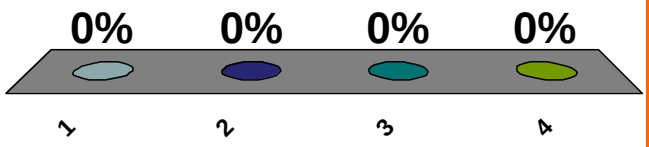
Quartic coefficient in $3x^5 + x^4 - x^3 + 8x + \pi$

(a) 1

(b) 3

(c) -1

(d) none of the above



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Leading coefficient in

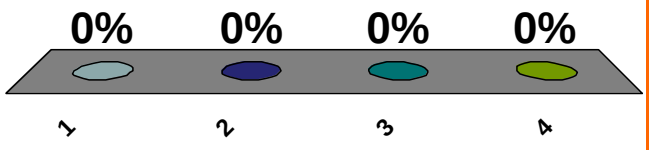
$$3x^5 + x^4 - x^3 + 8x + \pi$$

(a) 1

(b) 3

(c) -1

(d) none of the above



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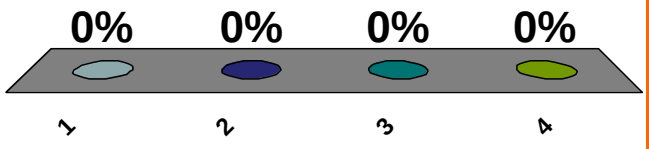
$x^2 + 3x + 1$ is ??

(a) polynomial

(b) rational, not polynomial

(c) algebraic, not rational

(d) none of the above



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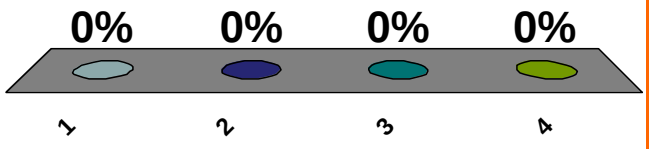
$x^2 + 3\sqrt{x} + 1$ is ??

(a) polynomial

(b) rational, not polynomial

(c) algebraic, not rational

(d) none of the above



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$\sin x$ is ??

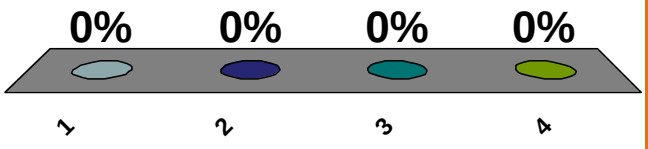
(a) polynomial

(b) rational, not polynomial

(c) algebraic, not rational

(d) none of the above

Correct answer: transcendental



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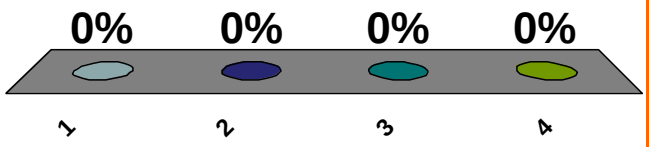
x^{10} is ??

(a) polynomial

(b) rational, not polynomial

(c) algebraic, not rational

(d) none of the above



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10^x is ??

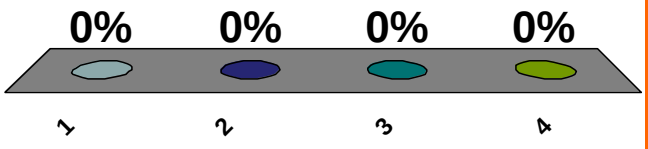
(a) polynomial

(b) rational, not polynomial

(c) algebraic, not rational

(d) none of the above

Correct answer: transcendental



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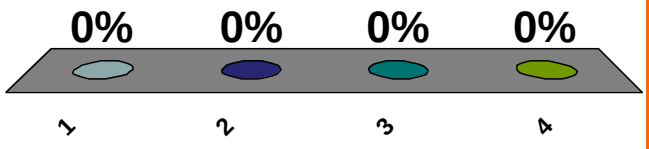
$\frac{1}{x}$ is ??

(a) polynomial

(b) rational, not polynomial

(c) algebraic, not rational

(d) none of the above



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

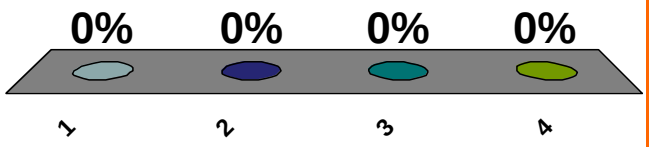
$(2x - y)^3 = ??$

(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



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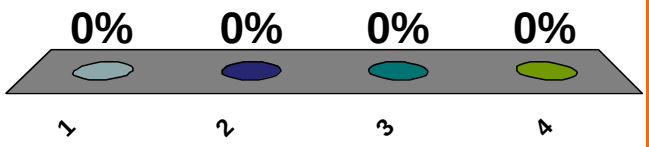
distance from 7 to 9?

(a) 2

(b) −2

(c) 4

(d) none of the above



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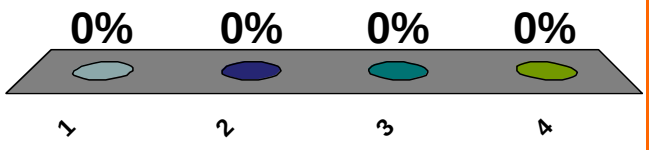
distance from 9 to 7?

(a) 2

(b) −2

(c) 4

(d) none of the above



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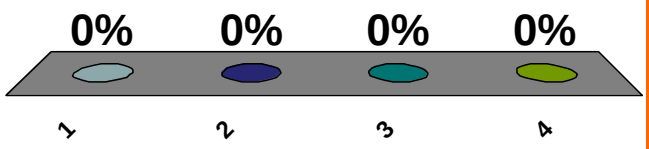
distance from x to 5?

(a) $5 - x$

(b) $|5 - x|$

(c) $x - 5$

(d) none of the above



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0 of 5

Topic 0050

0 pts

distance from a to b?

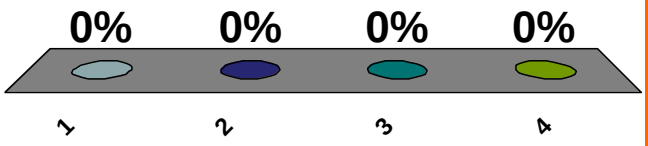
(a) $a - b$

(b) $b - a$

(c) $a + b$

(d) none of the above

Correct answer: $|a - b|$



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graph intervals
graph neighborhoods
graph punctured neighborhoods
additivity of error

LOOK AHEAD

t^2 rods in t seconds; velocity?
differentiate polynomials
differentiate trig functions

SAVE THE SESSION DATA

RETURN TO PRESENTATION