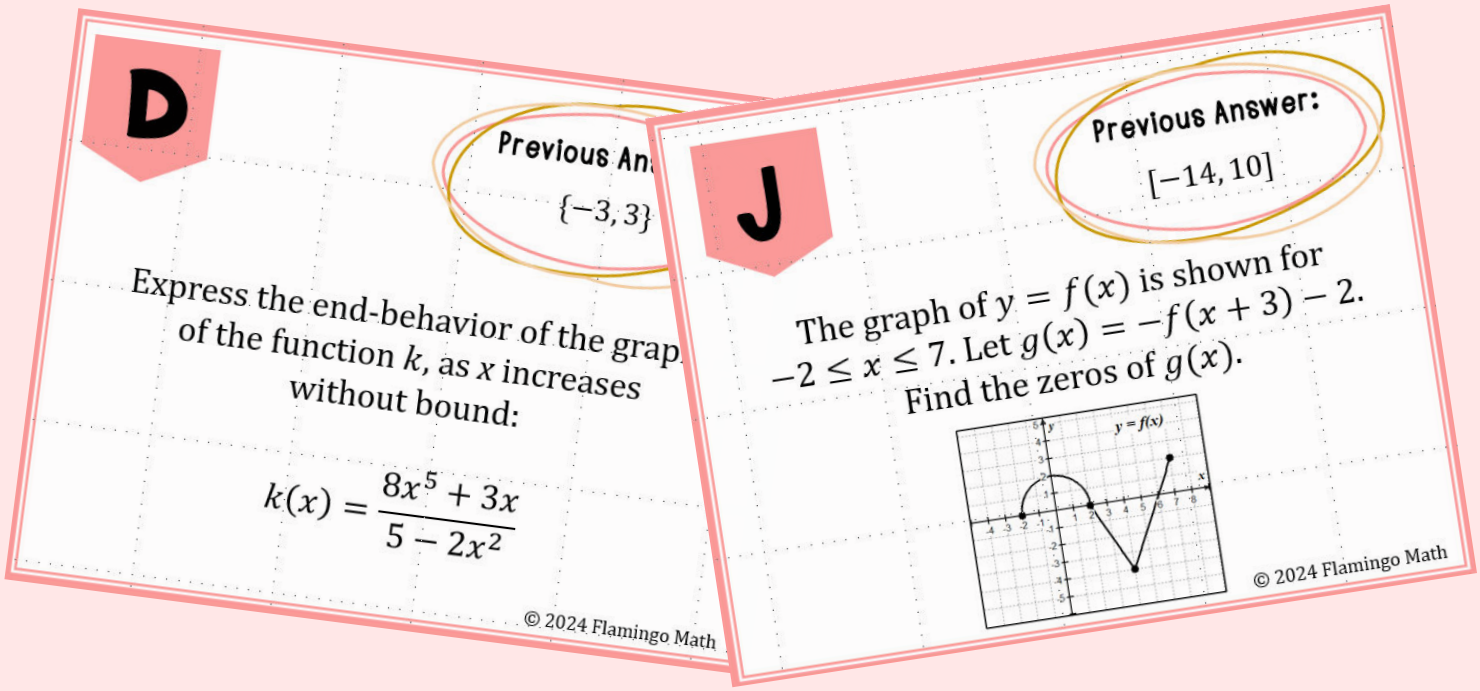
AP® Precalculus

Rational Functions and Graphs



Scavenger Hunt

Flamingo MATH
Jean Adams

A

Previous Answer: $\{0, 2\}$

Name the y-coordinate for the hole in the graph of f, given:

$$f(x) = \frac{2x^2 + x - 10}{x^2 - 4}$$

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B

Previous Answer: -160

The table below gives values of the function f at selected values of x.
Let $g(x) = 3f\left(\frac{1}{2}x\right) - 2$. Find $g(10)$.

x	-5	-3	-1	0	1	3	5
$f(x)$	-4	0	2	5	2	-1	-4

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C

Previous Answer: $[-4, 1)$

Name the y-coordinate for the hole in the graph of h, given:

$$h(x) = \frac{(x-4)(x+3)^2(x+5)^2}{(x+3)^2(x+5)^3}$$

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E

Previous Answer: $-\frac{5}{2}$

Find the coefficient of the term containing x^3 when $(x+2)^5$ is expanded.

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F

Previous Answer: $\left\{-2, \frac{5}{2}\right\}$

Solve the inequality algebraically:

$$\frac{(5-x)(x+2)^2}{x-1} > 0$$

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G

Previous Answer: $y = 2x + 1$

H

Previous Answer: $[-11, 7]$

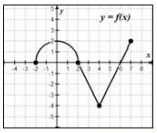
The range of a function $y = f(x)$ is $-5 \le y \le 7$.
Find the range of h, given:
$h(x) = 2f(x+3) - 4$

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J

Previous Answer: $[-14, 10]$

The graph of $y = f(x)$ is shown for $-2 \le x \le 7$. Let $g(x) = -f(x+3) - 2$.
Find the zeros of $g(x)$.



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K

Previous Answer: $\frac{9}{4}$

Find the asymptote for the graph of g:

$$g(x) = \frac{2x^2 - 9x + 7}{x - 5}$$

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L

Previous Answer: $(1, 5)$

Solve the inequality algebraically:

$$\frac{x+4}{x-1} \le 0$$

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N

Previous Answer: $-\infty$

Find the zeros of the rational function:

$$g(x) = \frac{2x^2 - x - 10}{x^2 - 5x + 6}$$

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P

Previous Answer: -14

The domain of a function $y = f(x)$ is $-8 \le x \le 10$.
Find the domain of h, given:
$h(x) = 2f(x+3) - 4$

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Q

Previous Answer: 40

Find the coefficient of the term containing x^3 when $(2x-1)^6$ is expanded.

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R

Previous Answer: $y = -\frac{9}{2}$

Find the x-value(s) where the graph of f is undefined:

$$f(x) = \frac{x^2 + x - 12}{x^2 - 9}$$

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