

Only three forms of an answer will get you full credit the statement of a point, the statement of a line, the word NONE (this is a section that you will be on SUMMATIVE assessment on Thursday)

$$1. f(x) = \frac{x^2+5x+4}{-2x^3+8x} = \frac{(x+1)(x+4)}{-2x(x+2)(x-2)}$$

X intercept(s) _____

Y intercept _____

Horizontal asymptote _____

Vertical asymptote _____

Does this rational function have a hole? _____

If this rational function has a hole, then state it _____

State Domain of the Function using one method (On Formative Friday)

Only three forms of an answer will get you full credit A numerical value, $+\infty$, or $-\infty$ (this is a section that you will be on FORMATIVE assessment on FRIDAY)

Function Behavior from the LEFT of given x values

Function Behavior from the RIGHT of given x values

As $x \rightarrow 1^-$ $y \rightarrow$ _____

As $x \rightarrow 1^+$ $y \rightarrow$ _____

As $x \rightarrow -2^-$ $y \rightarrow$ _____

As $x \rightarrow -2^+$ $y \rightarrow$ _____

As $x \rightarrow 0^-$ $y \rightarrow$ _____

As $x \rightarrow 0^+$ $y \rightarrow$ _____

As $x \rightarrow 2^-$ $y \rightarrow$ _____

As $x \rightarrow 2^+$ $y \rightarrow$ _____

END behavior of a function

END behavior of a function

As $x \rightarrow -\infty$ $y \rightarrow$ _____

As $x \rightarrow +\infty$ $y \rightarrow$ _____

State Domain of the Function using a different method (on Formative Friday)

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$$2. g(x) = \frac{x^2-4}{x^3+5x^2-14x} = \frac{(x+2)(x-2)}{x(x+7)(x-2)}$$

X intercept(s) _____

Y intercept _____

Horizontal asymptote _____

Vertical asymptote _____

Does this rational function have a hole? _____

If this rational function has a hole, then state it _____

State Domain of the Function using one method (On Formative Friday)

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Function Behavior from the LEFT of given x values

Function Behavior from the RIGHT of given x values

As $x \rightarrow -7^-$ $y \rightarrow$ _____

As $x \rightarrow -7^+$ $y \rightarrow$ _____

As $x \rightarrow -2^-$ $y \rightarrow$ _____

As $x \rightarrow -2^+$ $y \rightarrow$ _____

As $x \rightarrow 0^-$ $y \rightarrow$ _____

As $x \rightarrow 0^+$ $y \rightarrow$ _____

As $x \rightarrow 2^-$ $y \rightarrow$ _____

As $x \rightarrow 2^+$ $y \rightarrow$ _____

END behavior of a function

END behavior of a function

As $x \rightarrow -\infty$ $y \rightarrow$ _____

As $x \rightarrow +\infty$ $y \rightarrow$ _____

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$$3. h(x) = \frac{x^2+1x-2}{-2x^3+8x} = \frac{(x+2)(x-1)}{-2x(x+2)(x-2)}$$

X intercept(s) _____

Y intercept _____

Horizontal asymptote _____

Vertical asymptote _____

Does this rational function have a hole? _____

If this rational function has a hole, then state it _____

State Domain of the Function using one method
(On Formative Friday)

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Function Behavior from the LEFT
of given x values

As $x \rightarrow 1^-$ $y \rightarrow$ _____

As $x \rightarrow -2^-$ $y \rightarrow$ _____

As $x \rightarrow 0^-$ $y \rightarrow$ _____

As $x \rightarrow 2^-$ $y \rightarrow$ _____

END behavior of a function

As $x \rightarrow -\infty$ $y \rightarrow$ _____

Function Behavior from the
RIGHT of given x values

As $x \rightarrow 1^+$ $y \rightarrow$ _____

As $x \rightarrow -2^+$ $y \rightarrow$ _____

As $x \rightarrow 0^+$ $y \rightarrow$ _____

As $x \rightarrow 2^+$ $y \rightarrow$ _____

END behavior of a function

As $x \rightarrow +\infty$ $y \rightarrow$ _____

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$$4. j(x) = \frac{x^2-4x}{2x^3+10x^2} = \frac{x(x-4)}{2x^2(x+5)}$$

X intercept(s) _____

Y intercept _____

Horizontal asymptote _____

Vertical asymptote _____

Does this rational function have a hole? _____

If this rational function has a hole, then state it _____

State Domain of the Function using one method
(On Formative Friday)

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Function Behavior from the LEFT
of given x values

As $x \rightarrow 4^-$ $y \rightarrow$ _____

As $x \rightarrow -5^-$ $y \rightarrow$ _____

As $x \rightarrow 0^-$ $y \rightarrow$ _____

As $x \rightarrow 3^-$ $y \rightarrow$ _____

END behavior of a function

As $x \rightarrow -\infty$ $y \rightarrow$ _____

Function Behavior from the
RIGHT of given x values

As $x \rightarrow 4^+$ $y \rightarrow$ _____

As $x \rightarrow -5^+$ $y \rightarrow$ _____

As $x \rightarrow 0^+$ $y \rightarrow$ _____

As $x \rightarrow 3^+$ $y \rightarrow$ _____

END behavior of a function

As $x \rightarrow +\infty$ $y \rightarrow$ _____

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$$5. k(x) = \frac{5x-15}{2x+10}$$

X intercept(s) _____

Y intercept _____

Horizontal asymptote _____

Vertical asymptote _____

Does this rational function have a hole? _____

If this rational function has a hole, then state it _____

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Function Behavior from the LEFT of given x values

As $x \rightarrow 5^-$ $y \rightarrow$ _____

As $x \rightarrow -5^-$ $y \rightarrow$ _____

As $x \rightarrow 3^-$ $y \rightarrow$ _____

As $x \rightarrow -3^-$ $y \rightarrow$ _____

END behavior of a function

As $x \rightarrow -\infty$ $y \rightarrow$ _____

Function Behavior from the RIGHT of given x values

As $x \rightarrow 5^+$ $y \rightarrow$ _____

As $x \rightarrow -5^+$ $y \rightarrow$ _____

As $x \rightarrow 3^+$ $y \rightarrow$ _____

As $x \rightarrow -3^+$ $y \rightarrow$ _____

END behavior of a function

As $x \rightarrow +\infty$ $y \rightarrow$ _____

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$$6. m(x) = \frac{2x^3-8x}{x^2+3x-10}$$

X intercept(s) _____

Y intercept _____

Horizontal asymptote _____

Vertical asymptote _____

Does this rational function have a hole? _____

If this rational function has a hole, then state it _____

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Function Behavior from the LEFT of given x values

As $x \rightarrow -5^-$ $y \rightarrow$ _____

As $x \rightarrow -2^-$ $y \rightarrow$ _____

As $x \rightarrow 0^-$ $y \rightarrow$ _____

As $x \rightarrow 2^-$ $y \rightarrow$ _____

END behavior of a function

As $x \rightarrow -\infty$ $y \rightarrow$ _____

Function Behavior from the RIGHT of given x values

As $x \rightarrow -5^+$ $y \rightarrow$ _____

As $x \rightarrow -2^+$ $y \rightarrow$ _____

As $x \rightarrow 0^+$ $y \rightarrow$ _____

As $x \rightarrow 2^+$ $y \rightarrow$ _____

END behavior of a function

As $x \rightarrow +\infty$ $y \rightarrow$ _____

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$$7. n(x) = \frac{-10x+5x^2}{4x^2+8x}$$

X intercept(s) _____

Y intercept _____

Horizontal asymptote _____

Vertical asymptote _____

Does this rational function have a hole? _____

If this rational function has a hole, then state it _____

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Function Behavior from the LEFT of given x values

As $x \rightarrow -5^-$ $y \rightarrow$ _____

As $x \rightarrow -2^-$ $y \rightarrow$ _____

As $x \rightarrow 0^-$ $y \rightarrow$ _____

As $x \rightarrow 2^-$ $y \rightarrow$ _____

END behavior of a function

As $x \rightarrow -\infty$ $y \rightarrow$ _____

Function Behavior from the RIGHT of given x values

As $x \rightarrow -5^+$ $y \rightarrow$ _____

As $x \rightarrow -2^+$ $y \rightarrow$ _____

As $x \rightarrow 0^+$ $y \rightarrow$ _____

As $x \rightarrow 2^+$ $y \rightarrow$ _____

END behavior of a function

As $x \rightarrow +\infty$ $y \rightarrow$ _____

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$$8. p(x) = \frac{x^2-10x}{2x^3-20x^2}$$

X intercept(s) _____

Y intercept _____

Horizontal asymptote _____

Vertical asymptote _____

Does this rational function have a hole? _____

If this rational function has a hole, then state it _____

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Function Behavior from the LEFT of given x values

As $x \rightarrow -10^-$ $y \rightarrow$ _____

As $x \rightarrow 10^-$ $y \rightarrow$ _____

As $x \rightarrow 0^-$ $y \rightarrow$ _____

As $x \rightarrow 2^-$ $y \rightarrow$ _____

END behavior of a function

As $x \rightarrow -\infty$ $y \rightarrow$ _____

Function Behavior from the RIGHT of given x values

As $x \rightarrow -10^+$ $y \rightarrow$ _____

As $x \rightarrow -10^+$ $y \rightarrow$ _____

As $x \rightarrow 0^+$ $y \rightarrow$ _____

As $x \rightarrow 2^+$ $y \rightarrow$ _____

END behavior of a function

As $x \rightarrow +\infty$ $y \rightarrow$ _____

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