1. Determine the vertical asymptotes and holes in the rational function below.

$$f(x) = \frac{6x^3 - 1x^2 - 11x + 6}{12x^2 + x - 6}$$

   A. Vertical Asymptote of $x = -0.75$ and hole at $x = 0.667$

   B. Holes at $x = -0.75$ and $x = 0.667$ with no vertical asymptotes.

   C. Vertical Asymptote of $x = 0.5$ and hole at $x = 0.667$

   D. Vertical Asymptotes of $x = -0.75$ and $x = 0.667$ with no holes.

   E. Vertical Asymptotes of $x = -0.75$ and $x = -1.5$ with a hole at $x = 0.667$

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2. Determine the horizontal and/or oblique asymptotes in the rational function below.

$$f(x) = \frac{9x^3 - 30x^2 - 32x + 32}{-12x^3 + 10x^2 - 4x - 16}$$

   A. Horizontal Asymptote of $y = 0$

   B. None of the above

   C. Horizontal Asymptote of $y = -0.750$

   D. Vertical Asymptote of $y = -0.500$

   E. Vertical Asymptote of $y = 4$

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3. Determine the horizontal and/or oblique asymptotes in the rational function below.

$$f(x) = \frac{9x^3 + 21x^2 - 14x - 40}{3x^2 - x - 10}$$

   A. Horizontal Asymptote of $y = 3.0$ and Oblique Asymptote of $y = 3x + 8$

   B. Oblique Asymptote of $y = 3x + 8$.

   C. Horizontal Asymptote of $y = 2.0$ and Oblique Asymptote of $y = 3x + 8$

D. Horizontal Asymptote of $y = 3.0$

E. Horizontal Asymptote at $y = 2.0$

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4. Determine the vertical asymptotes and holes in the rational function below.

$$f(x) = \frac{6x^3 + 13x^2 - 10x - 24}{9x^2 - 27x + 20}$$

A. Vertical Asymptotes of $x = 1.667$ and $x = 1.333$ with no holes.

B. Vertical Asymptotes of $x = 1.667$ and $x = -1.5$ with a hole at $x = 1.333$

C. Vertical Asymptote of $x = 1.667$ and hole at $x = 1.333$

D. Vertical Asymptote of $x = 0.667$ and hole at $x = 1.333$

E. Holes at $x = 1.667$ and $x = 1.333$ with no vertical asymptotes.

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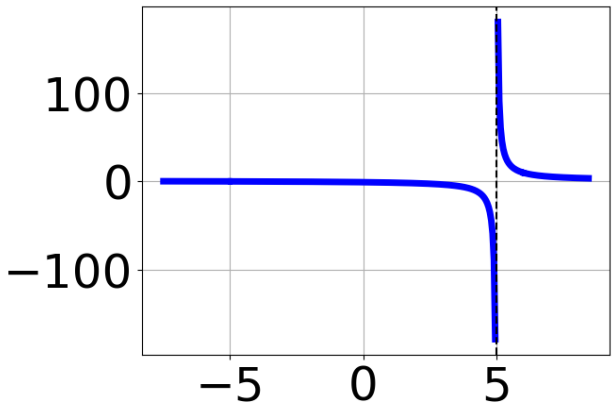
5. Which of the following functions *could* be the graph below?



A. $f(x) = \dfrac{x^3 + 6x^2 + 5x - 12}{x^3 - 6x^2 - 25x + 150}$

B. $f(x) = \dfrac{x^3 + 3x^2 - 34x - 120}{x^3 - 6x^2 - 25x + 150}$

C. $f(x) = \dfrac{x^3 - 3x^2 - 34x + 120}{x^3 + 6x^2 - 25x - 150}$

D. $f(x) = \dfrac{x^3 - 3x^2 - 34x + 120}{x^3 + 6x^2 - 25x - 150}$

E. None of the above are possible equations for the graph.

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6. Determine the vertical asymptotes and holes in the rational function below.

$$f(x) = \frac{9x^3 + 24x^2 + 4x - 16}{12x^2 + 7x - 10}$$

A. Holes at $x = -1.25$ and $x = 0.667$ with no vertical asymptotes.

B. Vertical Asymptote of $x = 0.75$ and hole at $x = 0.667$

C. Vertical Asymptote of $x = -1.25$ and hole at $x = 0.667$

D. Vertical Asymptotes of $x = -1.25$ and $x = -1.333$ with a hole at $x = 0.667$

E. Vertical Asymptotes of $x = -1.25$ and $x = 0.667$ with no holes.

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7. Determine the horizontal and/or oblique asymptotes in the rational function below.

$$f(x) = \frac{3x^2 - 4x - 4}{12x^3 + 11x^2 - 7x - 6}$$

A. Horizontal Asymptote of $y = 0$

B. Horizontal Asymptote of $y = 0.250$ and Oblique Asymptote of $y = 4x + 9$

C. Horizontal Asymptote at $y = 2.000$

D. Horizontal Asymptote of $y = 0.250$

E. Oblique Asymptote of $y = 4x + 9$.

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8. Determine the horizontal and/or oblique asymptotes in the rational function below.

$$f(x) = \frac{9x^3 - 9x^2 - 4x + 4}{3x^2 + 7x - 6}$$

A. Horizontal Asymptote at $y = -3.0$

B. Horizontal Asymptote of $y = 3.0$ and Oblique Asymptote of $y = 3x - 10$

C. Oblique Asymptote of $y = 3x - 10$.

D. Horizontal Asymptote of $y = 3.0$

E. Horizontal Asymptote of $y = -3.0$ and Oblique Asymptote of $y = 3x - 10$

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9. Determine the vertical asymptotes and holes in the rational function below.

$$f(x) = \frac{12x^3 - 5x^2 - 19x + 12}{8x^2 - 26x + 15}$$

A. Holes at $x = 2.5$ and $x = 0.75$ with no vertical asymptotes.

B. Vertical Asymptotes of $x = 2.5$ and $x = -1.333$ with a hole at $x = 0.75$

C. Vertical Asymptote of $x = 1.5$ and hole at $x = 0.75$

D. Vertical Asymptotes of $x = 2.5$ and $x = 0.75$ with no holes.

E. Vertical Asymptote of $x = 2.5$ and hole at $x = 0.75$

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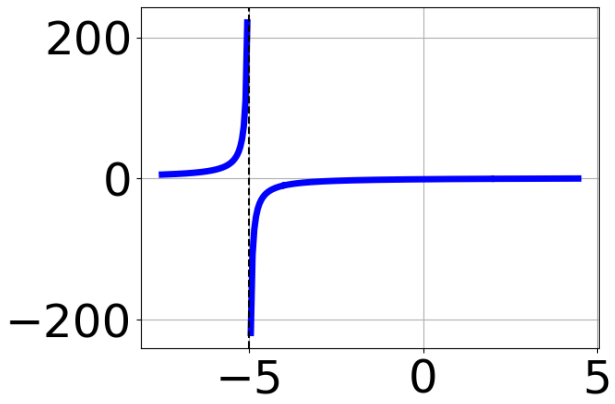
10. Which of the following functions *could* be the graph below?



A. $f(x) = \dfrac{x^3 - 4x^2 - 20x + 48}{x^3 + 7x^2 + 2x - 40}$

B. $f(x) = \dfrac{x^3 + x^2 - 36x - 36}{x^3 + 7x^2 + 2x - 40}$

C. $f(x) = \dfrac{x^3 + 4x^2 - 20x - 48}{x^3 - 7x^2 + 2x + 40}$

D. $f(x) = \dfrac{x^3 + 4x^2 - 20x - 48}{x^3 - 7x^2 + 2x + 40}$

E. None of the above are possible equations for the graph.
