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

$$f(x) = \frac{3x^2 - 13x + 12}{12x^3 - 25x^2 - 18x + 40}$$

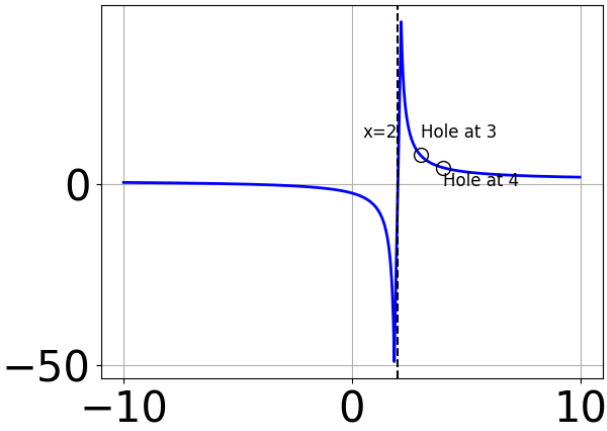
2. Determine the horizontal and/or oblique asymptotes in the rational function below.

$$f(x) = \frac{12x^3 - 13x^2 - 19x + 20}{-15x^3 + 52x^2 - 48x + 16}$$

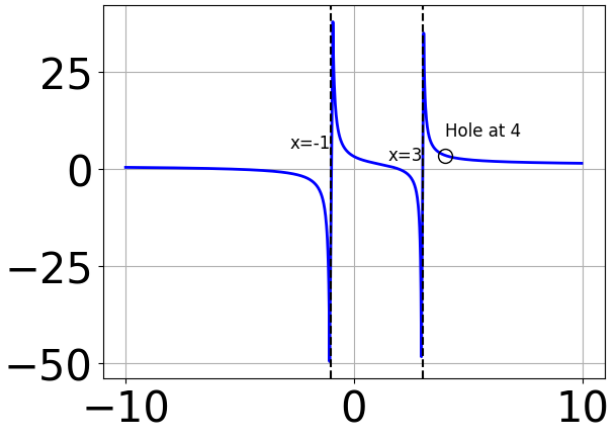
3. Determine the vertical asymptotes and holes in the rational function below.

$$f(x) = \frac{12x^3 + 55x^2 + 18x - 40}{12x^2 - 5x - 25}$$

4. Write an equation of a function that *could* be represented by the graph below. Explain why your function could represent the graph.



5. Write an equation of a function that *could* be represented by the graph below. Explain why your function could represent the graph.



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

$$f(x) = \frac{6x^3 + 7x^2 - 43x - 30}{2x^2 + x - 15}$$

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

$$f(x) = \frac{4x^3 + 12x^2 - 7x - 30}{6x^2 - x - 12}$$

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

$$f(x) = \frac{6x^3 - 31x^2 + 53x - 30}{12x^2 - 35x + 25}$$

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

$$f(x) = \frac{8x^3 + 6x^2 - 17x - 15}{6x^2 - 17x + 12}$$

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

$$f(x) = \frac{6x^3 + x^2 - 27x + 20}{2x^2 + 11x + 15}$$

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

$$f(x) = \frac{9x^3 - 9x^2 - 88x - 80}{6x^3 + x^2 + 8x + 80}$$

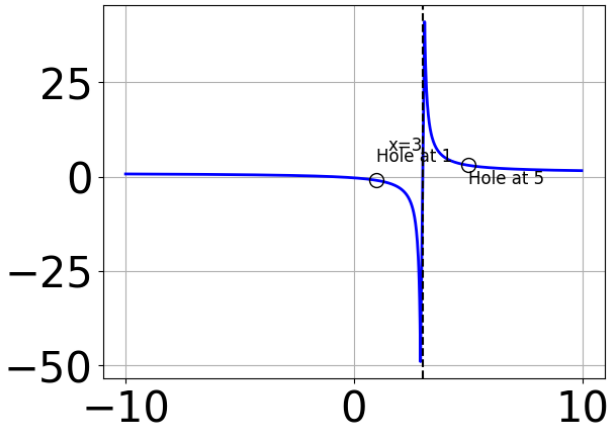
12. Determine the horizontal and/or oblique asymptotes in the rational function below.

$$f(x) = \frac{20x^3 - 33x^2 - 2x + 15}{20x^3 - 62x^2 + 52x - 15}$$

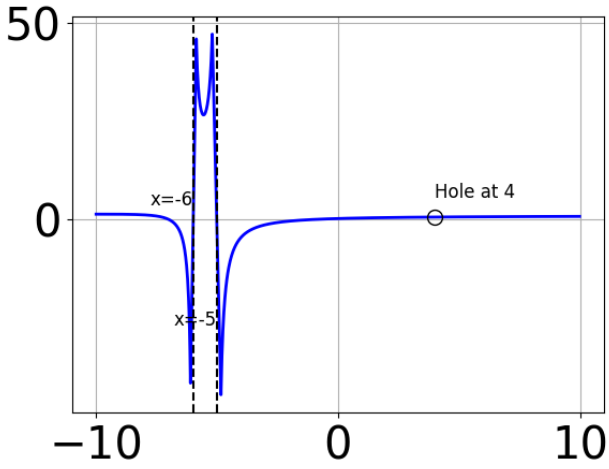
13. Determine the vertical asymptotes and holes in the rational function below.

$$f(x) = \frac{8x^3 - 10x^2 - 9x + 9}{6x^2 - 5x - 6}$$

14. Write an equation of a function that *could* be represented by the graph below. Explain why your function could represent the graph.



15. Write an equation of a function that *could* be represented by the graph below. Explain why your function could represent the graph.



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

$$f(x) = \frac{8x^3 - 10x^2 - 73x - 60}{4x^2 + 21x + 20}$$

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

$$f(x) = \frac{12x^3 - 47x^2 + 60x - 25}{9x^2 - 27x + 20}$$

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

$$f(x) = \frac{9x^3 + 36x^2 - 25x - 100}{12x^2 + 29x + 15}$$

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

$$f(x) = \frac{8x^3 - 46x^2 + 81x - 45}{16x^2 - 25}$$

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

$$f(x) = \frac{6x^3 - 35x^2 + 34x + 40}{3x^2 + 17x + 10}$$

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

$$f(x) = \frac{12x^3 - 53x^2 + 57x - 18}{-12x^3 + 7x^2 + 9x - 18}$$

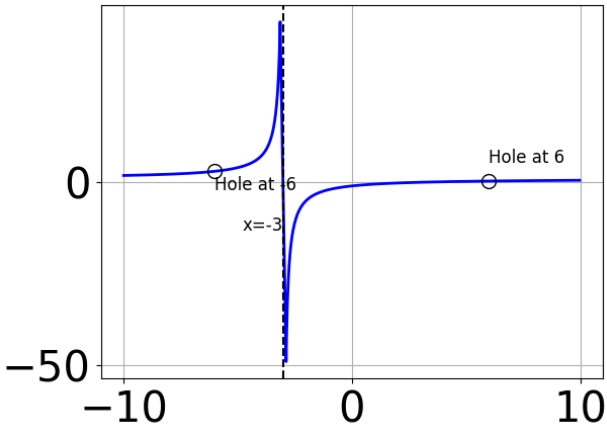
22. Determine the horizontal and/or oblique asymptotes in the rational function below.

$$f(x) = \frac{9x^3 + 24x^2 - 29x - 60}{-6x^3 + 32x^2 + 46x - 60}$$

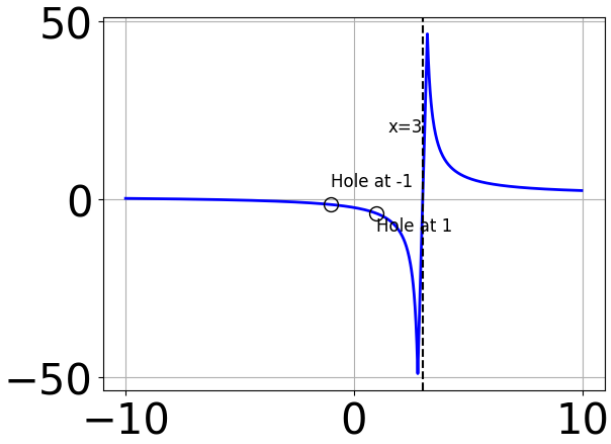
23. Determine the vertical asymptotes and holes in the rational function below.

$$f(x) = \frac{6x^3 - 1x^2 - 47x + 30}{6x^2 - 11x - 10}$$

24. Write an equation of a function that *could* be represented by the graph below. Explain why your function could represent the graph.



25. Write an equation of a function that *could* be represented by the graph below. Explain why your function could represent the graph.



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

$$f(x) = \frac{6x^3 - 29x^2 + 23x + 30}{3x^2 - 13x - 10}$$

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

$$f(x) = \frac{12x^3 - 59x^2 + 95x - 50}{9x^2 - 25}$$

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

$$f(x) = \frac{9x^3 + 15x^2 - 2x - 8}{9x^2 - 18x + 8}$$

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

$$f(x) = \frac{6x^3 + 49x^2 + 125x + 100}{9x^2 + 27x + 20}$$

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

$$f(x) = \frac{6x^3 + 13x^2 - 9x - 10}{3x^2 - 10x - 8}$$