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 Grade Book Detail
 Martinez, Jaqueline
 6.3
 Started: February 4, 2021, 11:45 am
 Last change: February 5, 2021, 4:51 pm
 Total time questions were on-screen: 42.6 minutes.
 Showing Scored Attempts | Show Last Attempts | Show Review Attempts
  Consider the rational function f(x) = \frac{x+6}{x-2}.
      a. Determine the vertical intercept of f.
                                         Preview
        f(0) = -3
     b. Determine the zeros (or "roots") of f.
                                  ✓ Preview
        x = -6
      c. Determine the vertical asymptote(s) of f.
                                  ✓ Preview
        x = 2
     d. Determine the horizontal asymptote of f.
                                  ✔ Preview
      e. Graph f. Complete this by selecting the point where the horizontal asymptote and vertical asymptote intersect, then selecting one point on the
        graph, such as the vertical intercept, horizontal intercept, or any other ordered pair, like (2, f(2)) or (-1, f(-1)).
         Clear All Draw:
    Show Answer
    Show Answer
    Show Answer
    Show Answer
    Show Answer
  Question 1: 5 out of 5 in 22 attempt(s)
  Consider the rational function g(x) = \frac{5x+4}{7x-3}.
      a. Determine the vertical intercept of g.
                                     ✓ Preview
        g(0) = -4/3
     b. Determine the zeros (or "roots") of g.
                   ✓ Preview
        x = -4/5
      c. Determine the vertical asymptote(s) of g.
                                  ✓ Preview
        x = 3/7
     d. Determine the horizontal asymptote of g.
                                   ✓ Preview
        y = 5/7
      e. Sketch that graph of f.
         Clear All Draw:
    Show Answer
    Show Answer
    Show Answer
    Show Answer
    Show Answer
  Question 2: 5 out of 5 in 10 attempt(s)
  Consider the rational function h(x) = \frac{5x}{(x-5)(x+6)}
      a. Determine the vertical intercept of h.
        h(0) = 0
                                         Preview
     b. Determine the zeros (or "roots") of h.
                     ✓ Preview
      c. Determine the vertical asymptote(s) of h.
                     ✓ Preview
        x = 5,-6
      d. Determine the horizontal asymptote of h.
                                  ✔ Preview
    Show Answer
    Show Answer
    Show Answer
    Show Answer
  Question 3: 4 out of 4 in 1 attempt(s)
  Consider the rational function j(x) = \frac{11x^2 + 8}{x - 6}.
      a. Determine the vertical intercept of j.
                      ✓ Preview
        j(0) = -8/6
     b. Determine the zeros (or "roots") of j.
                   ✓ Preview
      c. Determine the vertical asymptote(s) of j.
        x = 6 Preview
     d. Determine the horizontal asymptote of j.
                    ✓ Preview
        y=\, dne
  (If an answer does not exist, enter "DNE".)
    Show Answer
    Show Answer
    Show Answer
    Show Answer
  Question 4: 4 out of 4 in 3 attempt(s)
  Determine the behavior of the functions defined below. Note that it is common to write "f(x) \to \infty" to indicate f(x) increases without bound - use
  that notation below if needed.
    a. Consider f(x) = \frac{7x^2 + 6}{x - 7}. Complete the following statements.
           i. As x \to \infty, f(x) \to \boxed{\circ}
                                                           Preview
           ii. As x 	o -\infty, f(x) 	o -oo
                                                           ✓ Preview
          iii. As x 	o 7^+ , f(x) 	o oo
                                                            Preview
          iv. As x 	o 7^- , f(x) 	o -00
                                                             Preview
     b. Consider f(x) = \frac{x-9}{x+9}. Complete the following statements.
           i. As x \to \infty, f(x) \to 1
           ii. As x 	o -\infty, f(x) 	o 1
                                                           ✓ Preview
         iii. As x \to -9^+, f(x) \to -\infty Preview
iv. As x \to -9^-, f(x) \to \infty
    Show Answer
    Show Answer
  Question 5: 4 out of 4 in 13 attempt(s)
  Suppose f(x) = \frac{6x+9}{x-5}. Fill in the blanks below. (Note that it is common to say a limit "has a value of \infty" if the function output increases
  without bound, or -\infty if the output decreases without bound. Use that notation in this question.)
     a. \lim_{x \to \infty} f(x) = 6
                                         ✓ Preview
     b. \lim_{x	o -\infty} f(x) = 6
                                               Preview
     c. \lim_{x	o 5^+} f(x) = lacktriangledown
                                             Preview
     d. \lim_{x	o 5^-}f(x)= -oo
                                          ✔ Preview
    Show Answer
    Show Answer
    Show Answer
    Show Answer
  Question 6: 4 out of 4 in 5 attempt(s)
  Suppose f(x) = \frac{x^2 - 1}{x + 15}. Fill in the blanks below. (Note that it is common to say a limit "has a value of \infty" if the function output increases
  without bound, or -\infty if the output decreases without bound. Use that notation in this question.)
     a. \lim_{x 	o \infty} f(x) = lacktriangleoo
                                             Preview
     b. \lim_{x 	o -\infty} f(x) =  -00
                                              Preview
     c. \lim_{x	o -15^+} f(x) = oo
                                             ✓ Preview
     d. \lim_{x	o -15^-} f(x) =  -oo
                                                Preview
    Show Answer
    Show Answer
    Show Answer
    Show Answer
  Question 7: 4 out of 4 in 2 attempt(s)
  The graph of a rational function g is shown below.
                                                                                           |x|
  Fill in the blanks below. (Note that it is common to say a limit "has a value of \infty" if the function output increases without bound, or -\infty if the
  output decreases without bound. Use that notation in this question.)
     a. \lim_{x 	o \infty} g(x) = 3
                                             Preview
     b. \lim_{x \to -\infty} g(x) = 3
                                               Preview
     c. \lim_{x 	o 3^+} g(x) = \overline{	ext{oo}}
                                              Preview
     d. \lim_{x 	o 3^-} g(x) =  -oo
                                              Preview
    Show Answer
    Show Answer
    Show Answer
    Show Answer
  Question 8: 4 out of 4 in 3 attempt(s)
  The graph of a rational function f is shown below.
  Fill in the blanks below. (Note that it is common to say a limit "has a value of \infty" if the function output increases without bound, or -\infty if the
  output decreases without bound. Use that notation in this question.)
      a. What is the vertical intercept of f?
        f(0) = 1
                                         Preview
     b. What are the roots of f?
                                     Preview
      c. What are the vertical asymptotes of f?
                                  ✓ Preview
     d. What is the horizontal asymptote of f?
                                  ✔ Preview
        y= -2
    Show Answer
    Show Answer
    Show Answer
    Show Answer
  Question 9: 4 out of 4 in 2 attempt(s)
  The information below tells us about the behavior of the rational function f around its asymptotes. Use this information to answer the following
  questions.
         \lim_{x 	o \infty} \ f(x) = 3
         \lim_{x 	o -\infty} \, f(x) = 3
          \lim f(x) = \infty
         \lim_{x\,	o\,-\,5^{\,+}}\,f(x)=\ -\,\infty
         \lim \quad f(x) = \infty
        \lim_{x \to 0} f(x) = \infty
      • The only horizontal intercept: (-1.8, 0).
      a. What is the vertical asymptote(s) of the function f? If there is no vertical asymptote, write DNE. Separate multiple answers with a comma.
                                   ✓ Preview
     b. What is the horizontal asymptote(s) of the function f? If there is no horizontal asymptote, write DNE.
        y = 3
                                  ✓ Preview
      c. Sketch a graph of the function f. The vertical intercept of f is f greater than 0
    Show Answer
    Show Answer
    Show Answer
  Question 10: 3 out of 3 in 19 attempt(s)
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Category Points Earned / Possible (Percent)

41 / 41 (100 %)

Categorized Score Breakdown

Total: 41/41