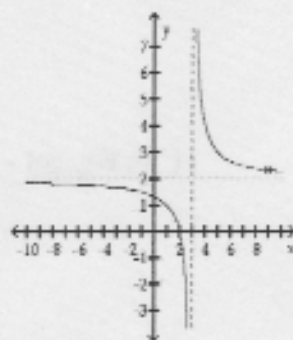


are required to write neatly and show all work on the test body (2 pages). No credits will be given for work only. Staple all your work together with test body on top, No loose pages accepted.

For the following rational function graph, y-intercept is $(0, \frac{9}{7})$, find

- Equation of the Vertical Asymptote
- Equation of the Horizontal Asymptote
- x-intercept
- Domain of this rational function
- Range of this rational function
- Equation of this rational function
- Coordinate (x, y) of the empty hole



For $f(x) = \frac{x-3}{x+4}$

- Find $D_f, R_f, f^{-1}, D_{f^{-1}}, R_{f^{-1}}$
- verify $f^{-1} \circ f = x$ and verify $f \circ f^{-1} = x$
- Graph function f, f^{-1} and $y = x$ on the same x-y plane

Use the properties of logarithms to rewrite each expression:

- $\log_4 \frac{\sqrt[3]{w}}{s^2 \cdot t^3 \cdot \sqrt[3]{u}}$
- $\frac{2}{3} \log_2(z-1) - \log_2(3z+2) + \log_2(z)$