

Unit 4 Rational Functions Test 2 Review – Graphing & Characteristics

1. What is the horizontal asymptote(s) of $f(x) = \frac{3x^2 - x - 2}{x^2 - 3x + 2}$?

2. What is (are) the vertical asymptote(s) of $f(x) = \frac{3x^2 - x + 2}{x^2 - 3x + 2}$??

3. What is/are the hole(s) in the graph of $f(x) = \frac{x - 4}{2x^2 - 8x}$

4. Find all asymptotes, holes, and intercepts of the following.

a) $f(x) = \frac{x}{x^2 - 1}$

b) $f(x) = \frac{x^2 - 2x}{x - 5}$

c) $f(x) = \frac{x^2 + x - 20}{x^2 + 8x + 15}$

HA: _____

HA: _____

HA: _____

Holes: _____

Holes: _____

Holes: _____

VA: _____

VA: _____

VA: _____

X-int: _____

X-int: _____

X-int: _____

Y-int: _____

Y-int: _____

Y-int: _____

5. State all asymptotes, holes and intercepts. Then graph $f(x) = \frac{x-1}{x^2-16}$.

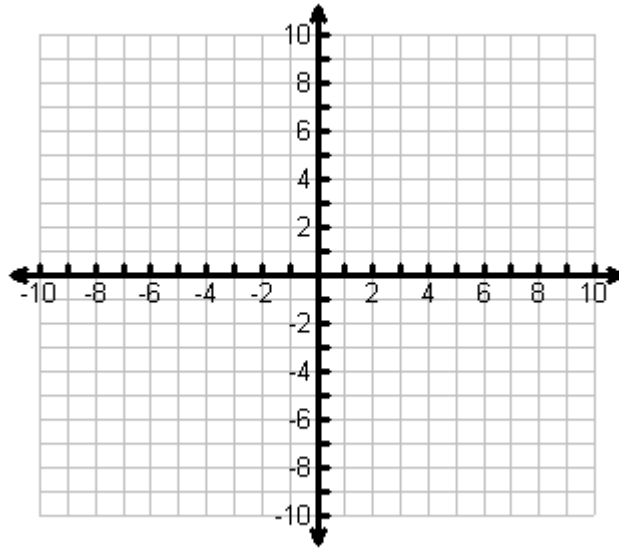
HA: _____

Holes: _____

VA: _____

x-int: _____

y-int: _____



6. State all asymptotes, holes and intercepts. Then graph $f(x) = \frac{3x^2+15x}{x^2+3x-10}$.

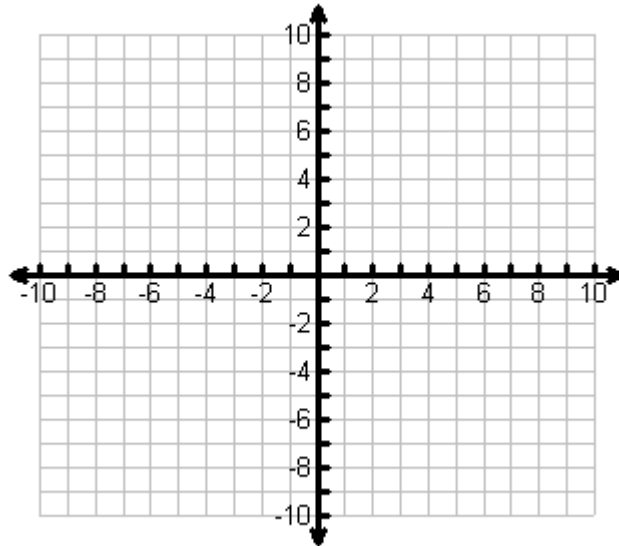
HA: _____

Holes: _____

VA: _____

x-int: _____

y-int: _____



7. State **all** asymptotes, holes and intercepts. Then graph $f(x) = \frac{x-1}{x^2-6x+5}$.

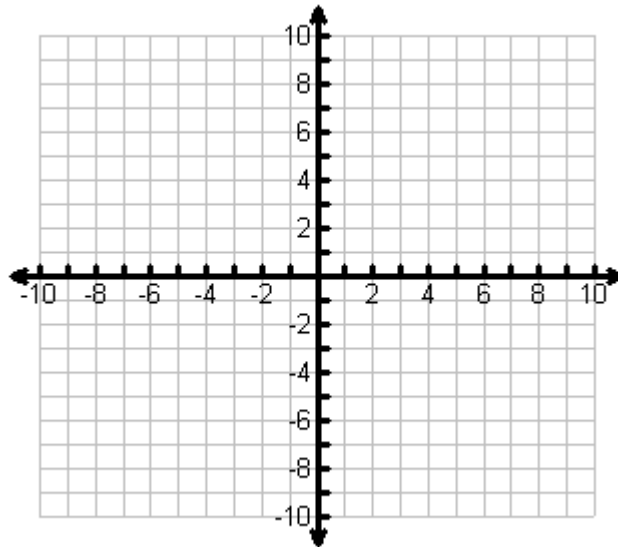
HA: _____

Holes: _____

VA: _____

x-int: _____

y-int: _____



8. State **all** asymptotes, holes and intercepts. Then graph $f(x) = \frac{2x-1}{x+2}$.

HA: _____

Holes: _____

VA: _____

x-int: _____

y-int: _____

