

Rational Functions with Slant Asymptotes and Removable Discontinuities

For each function, find [a] the x -intercept(s), [b] y -intercept, [c] vertical asymptote(s), [d] non-vertical asymptote, and [e] removable discontinuities. Make a sketch of the function.

[1] $f(x) = \frac{x^2 - 4}{x + 1}$

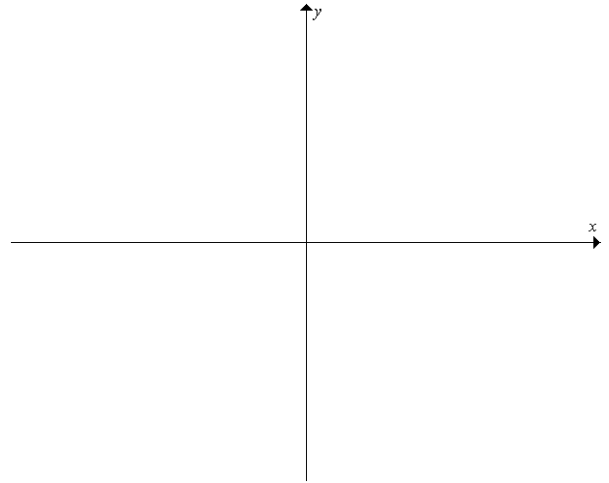
[a]

[b]

[c]

[d]

[e]



[2] $f(x) = \frac{x^2 - 1}{x + 2}$

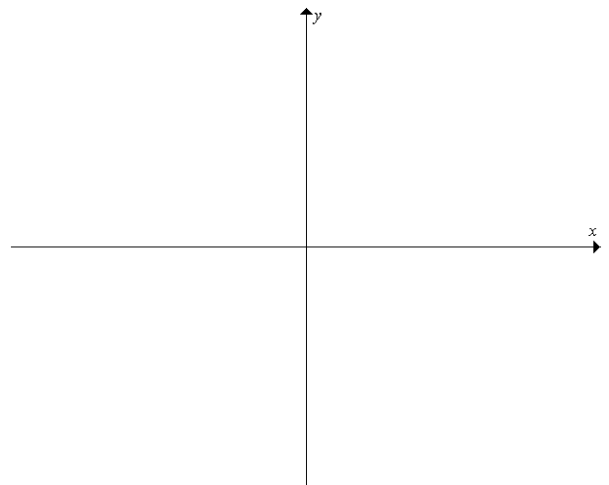
[a]

[b]

[c]

[d]

[e]



[3] $f(x) = \frac{x^3 - x}{x^2 - 4}$

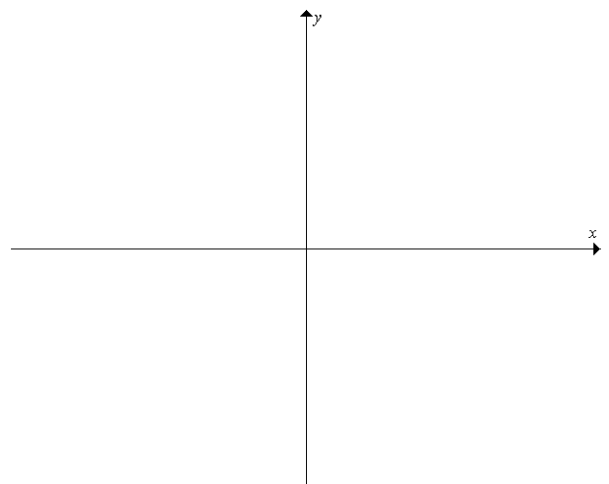
[a]

[b]

[c]

[d]

[e]



[4] $f(x) = \frac{x+1}{x^2-1}$

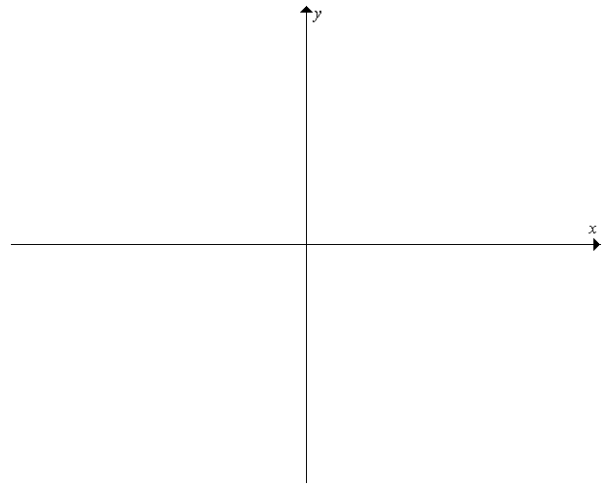
[a]

[b]

[c]

[d]

[e]



[5] $f(x) = \frac{x-2}{x^2-4}$

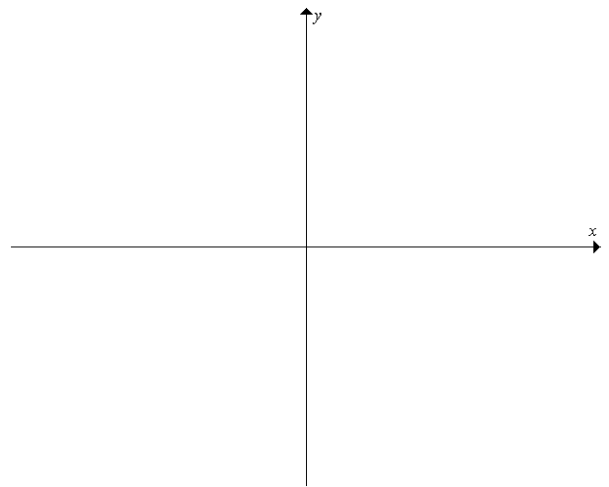
[a]

[b]

[c]

[d]

[e]



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

[a]

[b]

[c]

[d]

[e]

