

Graphing Rational Functions Using Transformations

Graph the rational function using the following parameters.

① $y = \frac{2}{x+1} - 3$

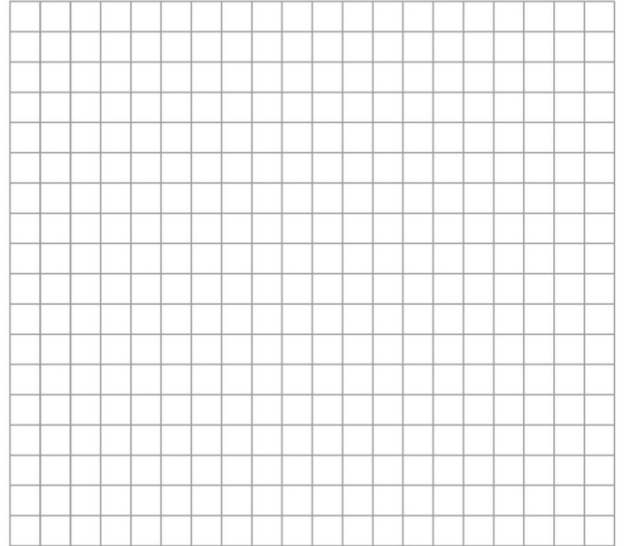
Horizontal asym of y : _____

Horizontal asym of x : _____

Guide points: _____, _____

Domain: _____

Range: _____



② $y = \frac{1}{x-3}$

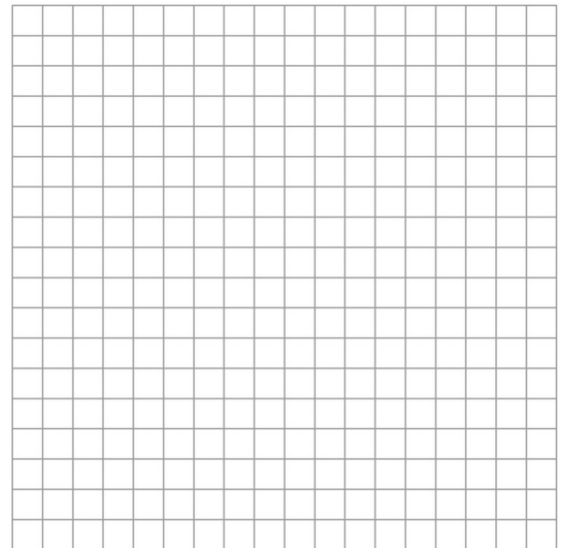
Horizontal asym of y : _____

Horizontal asym of x : _____

Guide points: _____, _____

Domain: _____

Range: _____



③ $y = \frac{-2}{x-2} - 1$

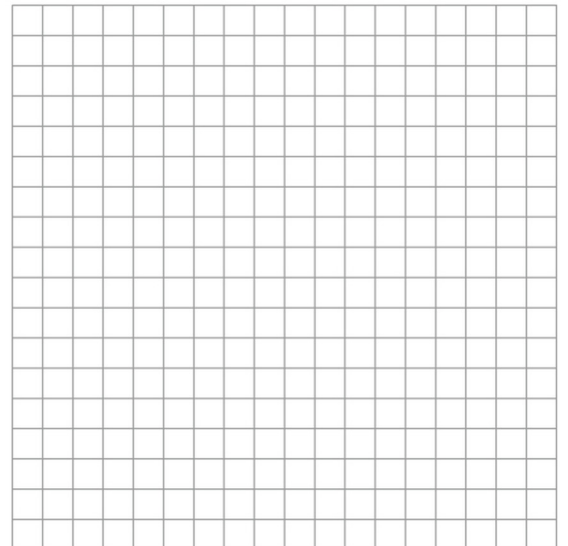
Horizontal asym of y : _____

Horizontal asym of x : _____

Guide points: _____, _____

Domain: _____

Range: _____



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Answers

① $y = \frac{2}{x+1} - 3$

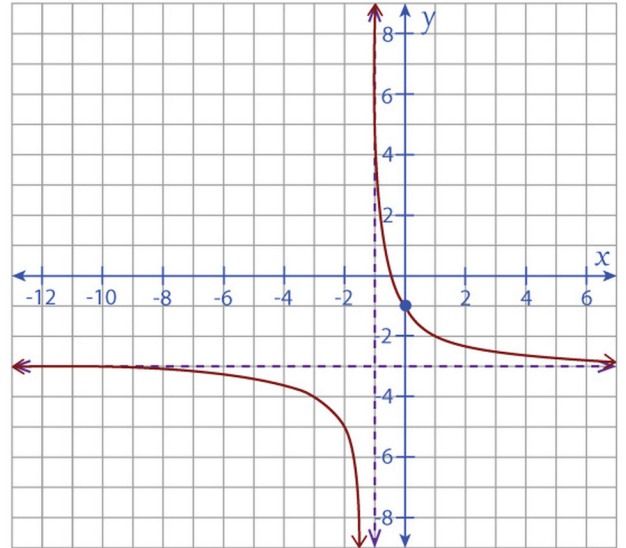
Horizontal asym of y : -3

Horizontal asym of x : -1

Guide points: (0, -1), (-2, -5)

Domain: $x \neq -1$

Range: $y \neq -3$



② $y = \frac{1}{x-3}$

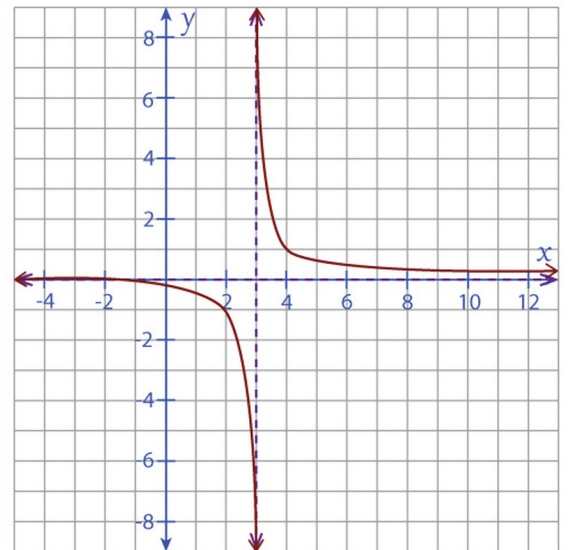
Horizontal asym of y : 0

Horizontal asym of x : 3

Guide points: (4, 1), (2, -1)

Domain: $x \neq 3$

Range: $y \neq 0$



③ $y = \frac{-2}{x-2} - 1$

Horizontal asym of y : -1

Horizontal asym of x : 2

Guide points: (3, -3), (1, 1)

Domain: $x \neq 2$

Range: $y \neq -1$

