

Math Sheet

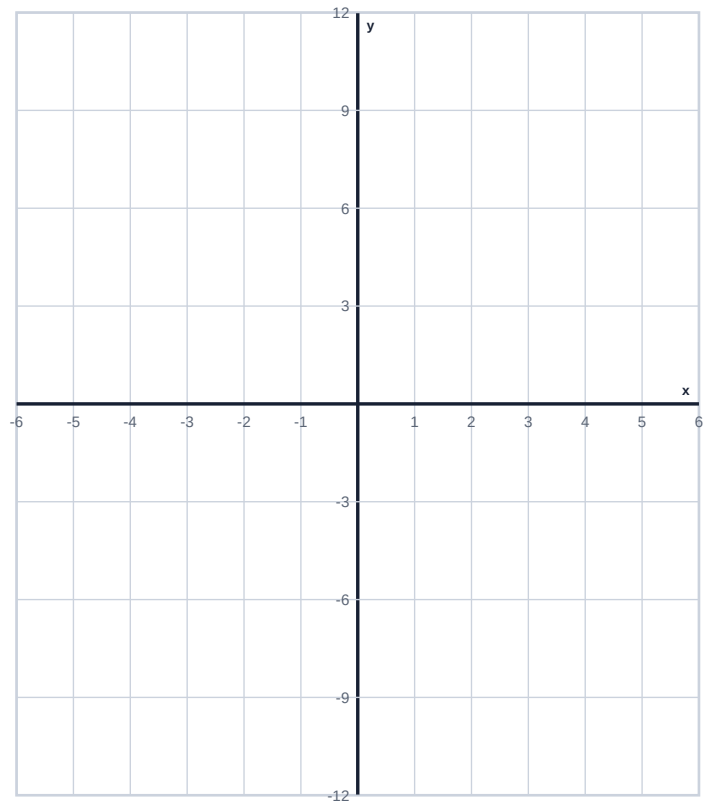
Name _____ Score _____ Teacher _____ Date _____

Graphing Simple Rational Functions

Find the asymptotes and intercepts, plot useful reference points, then graph each function on the blank grid.

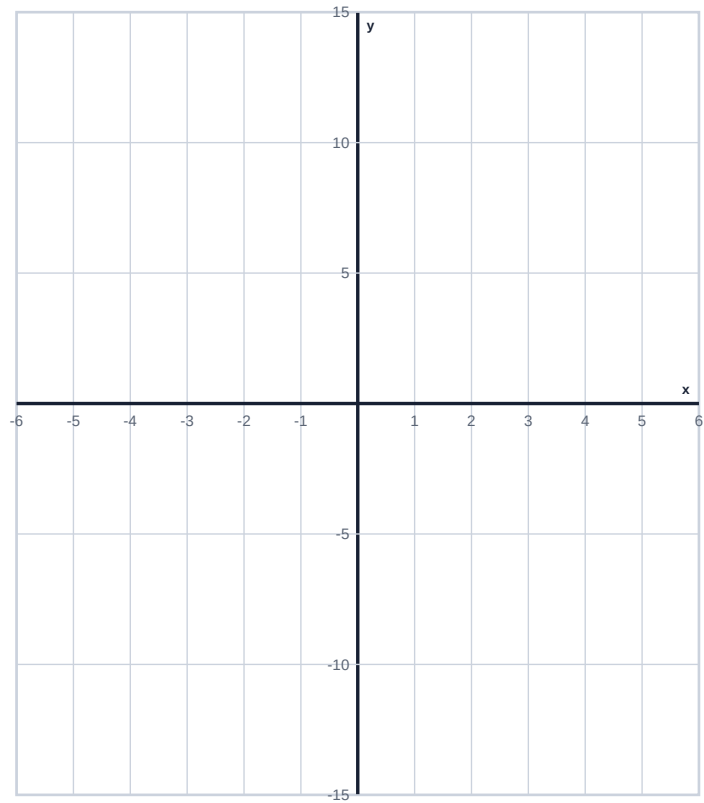
1. $f(x) = -6/x$

Original domain exclusions: _____
Holes: _____
Intercepts: _____
Vertical/horizontal/slant behavior: _____
Plot reference points, then sketch each branch.



2. $f(x) = 6/(x + 2) - 4$

Original domain exclusions: _____
Holes: _____
Intercepts: _____
Vertical/horizontal/slant behavior: _____
Plot reference points, then sketch each branch.

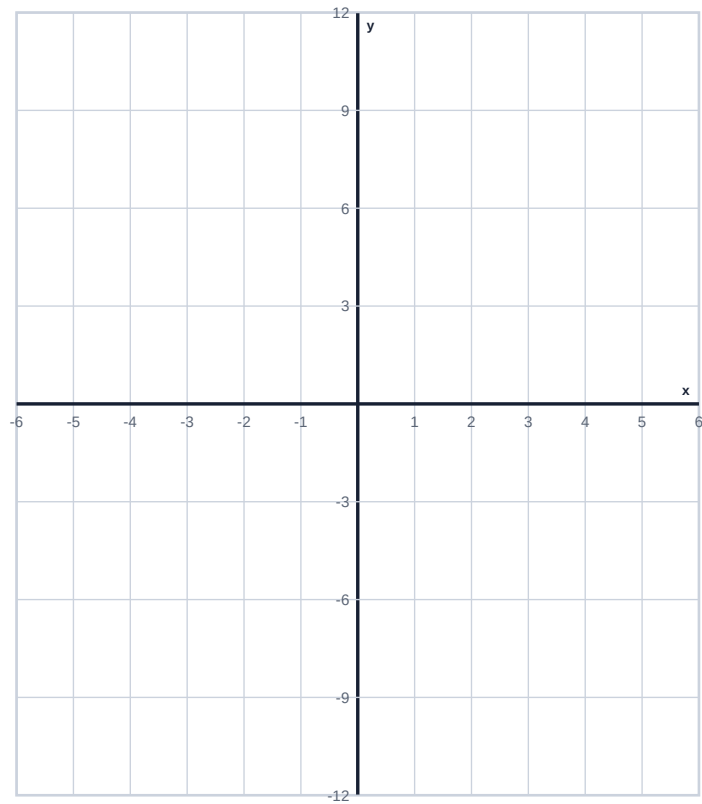


Graphing Simple Rational Functions

Find the asymptotes and intercepts, plot useful reference points, then graph each function on the blank grid.

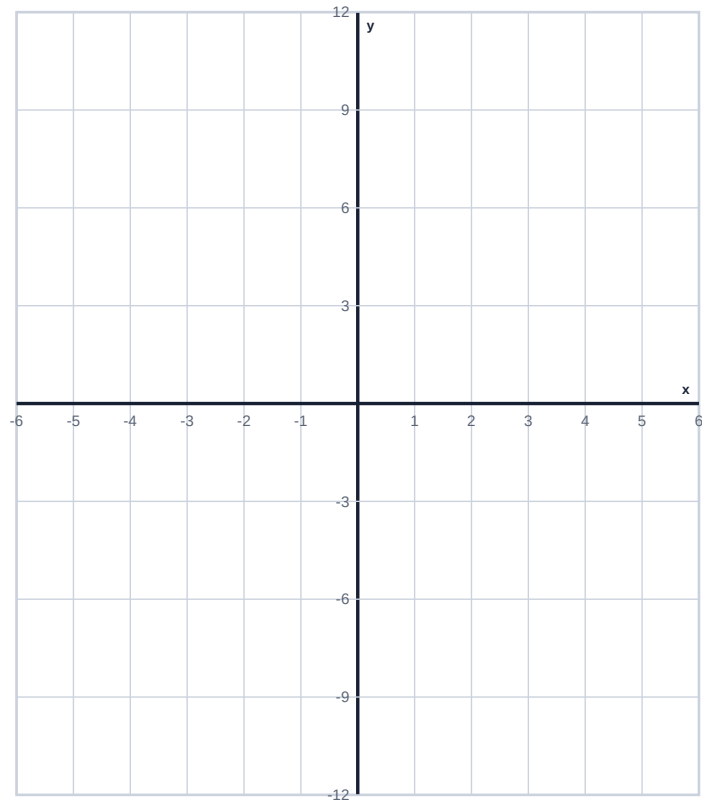
3. $f(x) = 1/(x - 1)$

Original domain exclusions: _____
Holes: _____
Intercepts: _____
Vertical/horizontal/slant behavior: _____
Plot reference points, then sketch each branch.



4. $f(x) = -3/(x + 1)$

Original domain exclusions: _____
Holes: _____
Intercepts: _____
Vertical/horizontal/slant behavior: _____
Plot reference points, then sketch each branch.

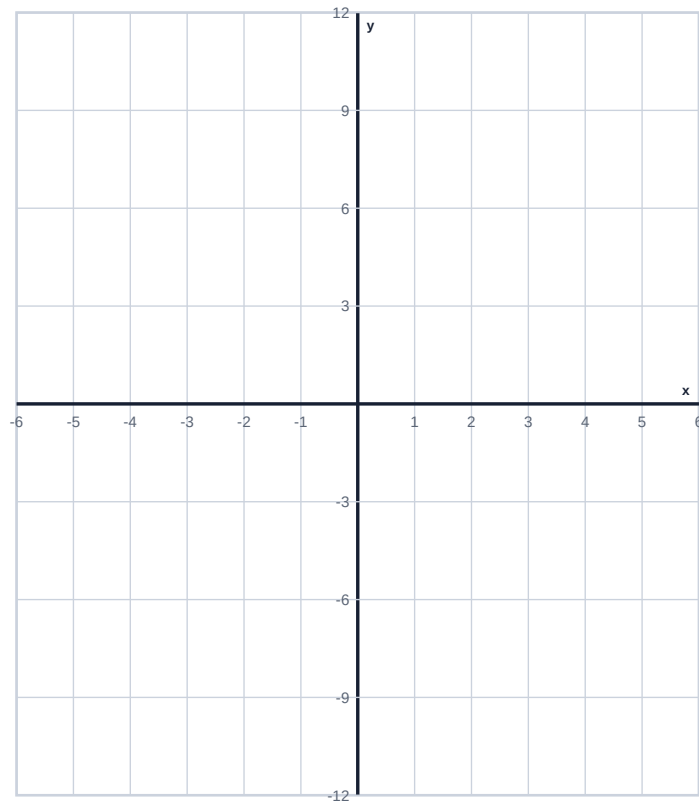


Graphing Simple Rational Functions

Find the asymptotes and intercepts, plot useful reference points, then graph each function on the blank grid.

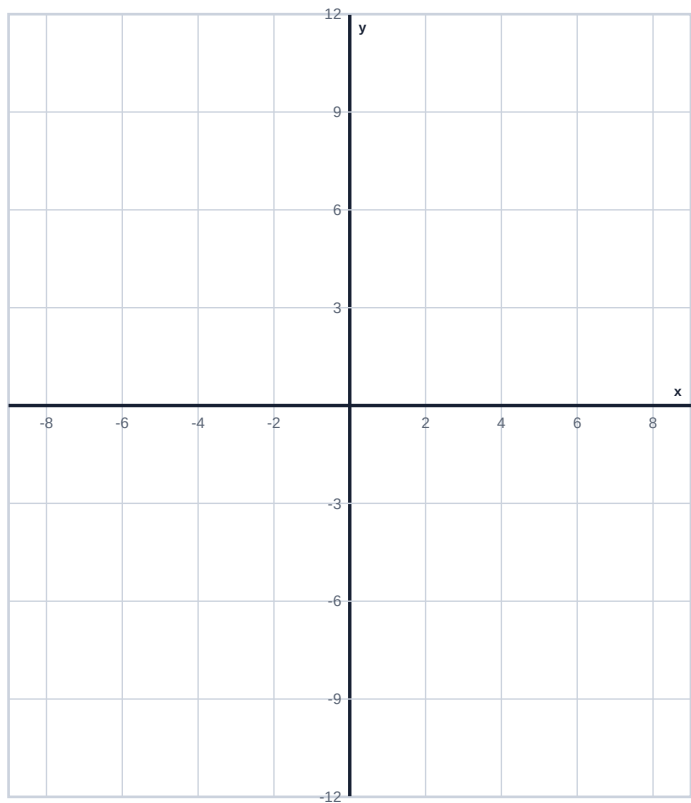
5. $f(x) = 6/x$

Original domain exclusions: _____
Holes: _____
Intercepts: _____
Vertical/horizontal/slant behavior: _____
Plot reference points, then sketch each branch.



6. $f(x) = 4/(x + 2) + 1$

Original domain exclusions: _____
Holes: _____
Intercepts: _____
Vertical/horizontal/slant behavior: _____
Plot reference points, then sketch each branch.



Math Sheet

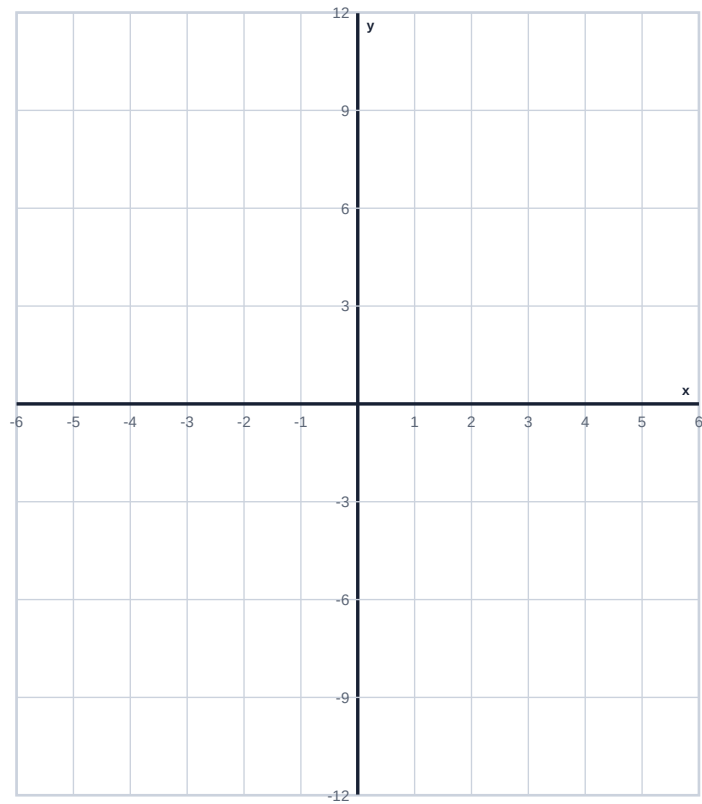
Name _____ Score _____ Teacher _____ Date _____

Graphing Simple Rational Functions

Find the asymptotes and intercepts, plot useful reference points, then graph each function on the blank grid.

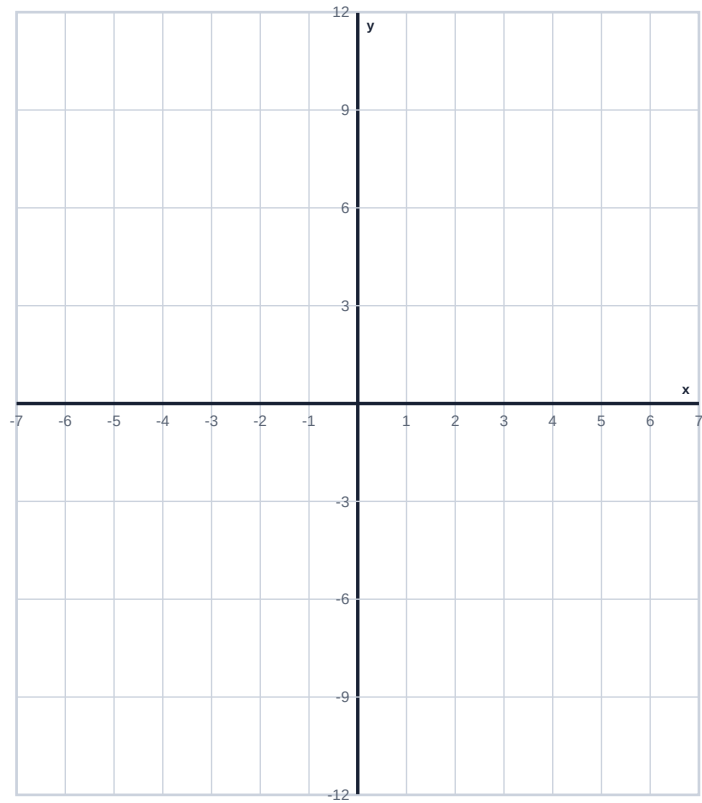
7. $f(x) = -5/x$

Original domain exclusions: _____
Holes: _____
Intercepts: _____
Vertical/horizontal/slant behavior: _____
Plot reference points, then sketch each branch.



8. $f(x) = 3/(x + 3) - 3$

Original domain exclusions: _____
Holes: _____
Intercepts: _____
Vertical/horizontal/slant behavior: _____
Plot reference points, then sketch each branch.



Math Sheet

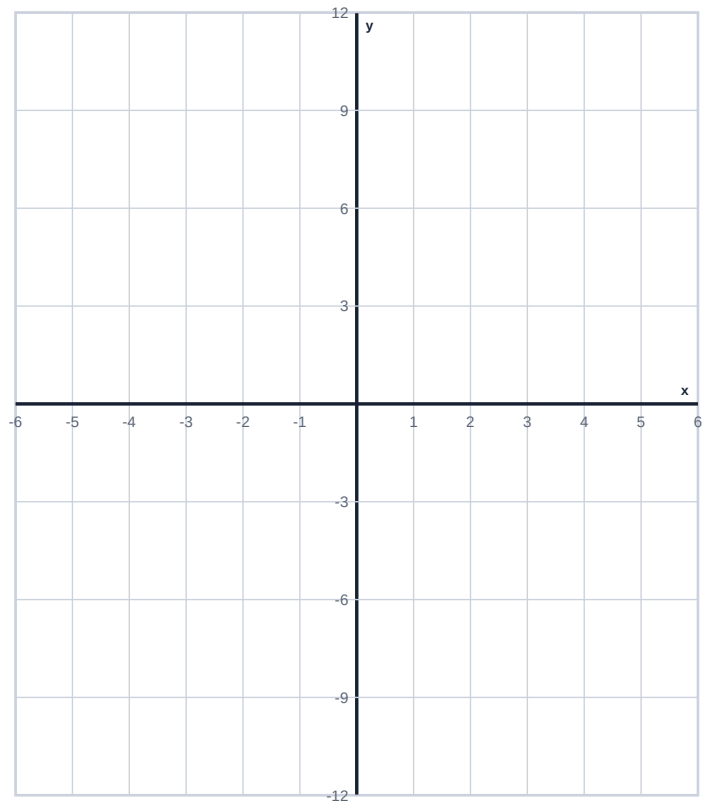
Name _____ Score _____ Teacher _____ Date _____

Graphing Simple Rational Functions

Find the asymptotes and intercepts, plot useful reference points, then graph each function on the blank grid.

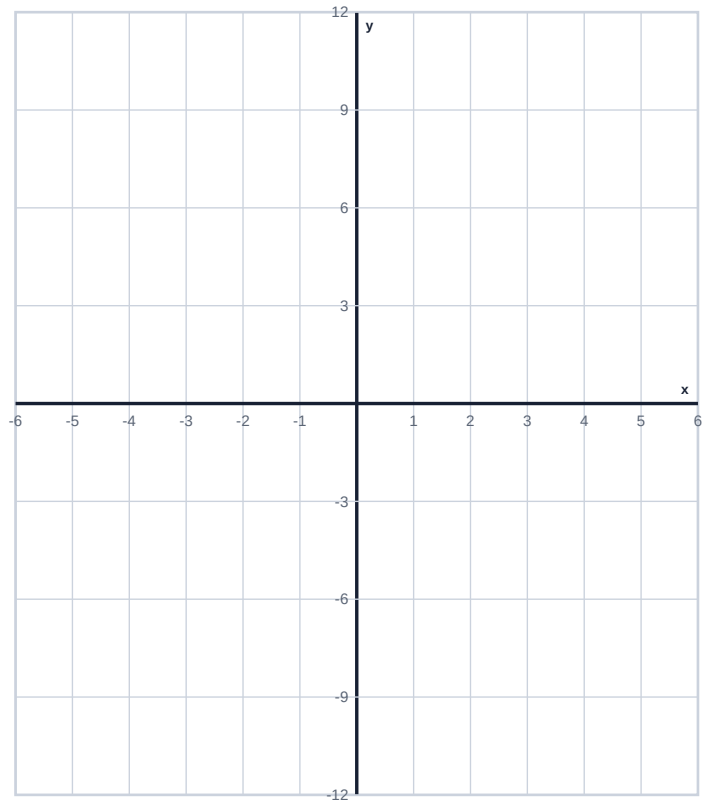
9. $f(x) = 6/(x - 1)$

Original domain exclusions: _____
Holes: _____
Intercepts: _____
Vertical/horizontal/slant behavior: _____
Plot reference points, then sketch each branch.



10. $f(x) = 2/x$

Original domain exclusions: _____
Holes: _____
Intercepts: _____
Vertical/horizontal/slant behavior: _____
Plot reference points, then sketch each branch.



Math Sheet

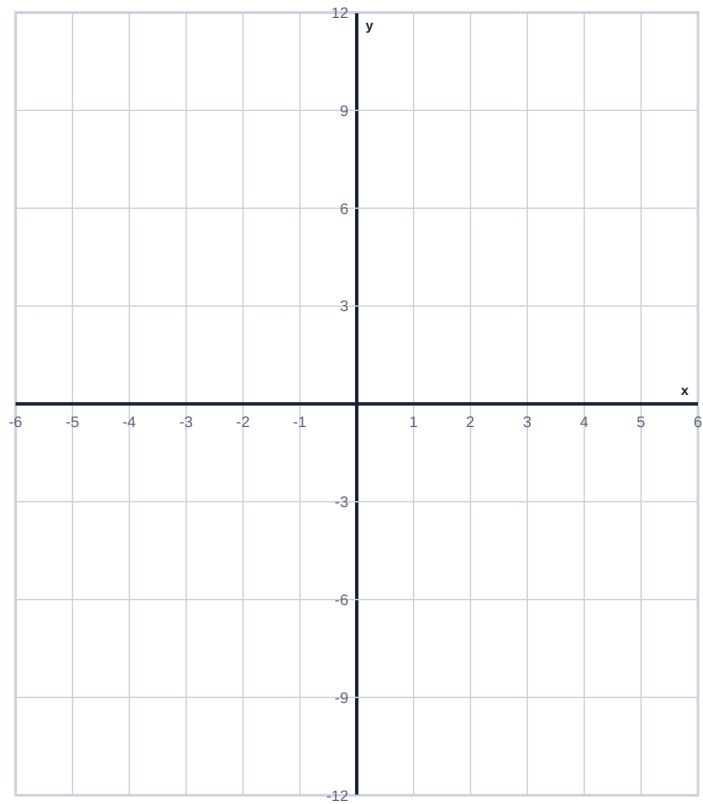
Name _____ Score _____ Teacher _____ Date _____

Graphing Simple Rational Functions

Find the asymptotes and intercepts, plot useful reference points, then graph each function on the blank grid.

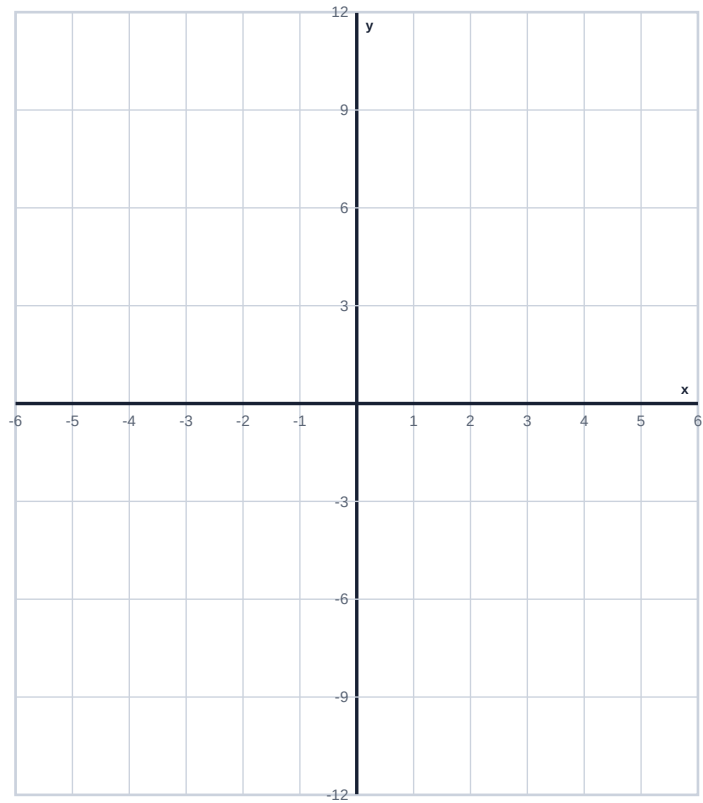
11. $f(x) = -2/(x - 1) - 4$

Original domain exclusions: _____
Holes: _____
Intercepts: _____
Vertical/horizontal/slant behavior: _____
Plot reference points, then sketch each branch.



12. $f(x) = 1/(x + 1)$

Original domain exclusions: _____
Holes: _____
Intercepts: _____
Vertical/horizontal/slant behavior: _____
Plot reference points, then sketch each branch.



Math Sheet

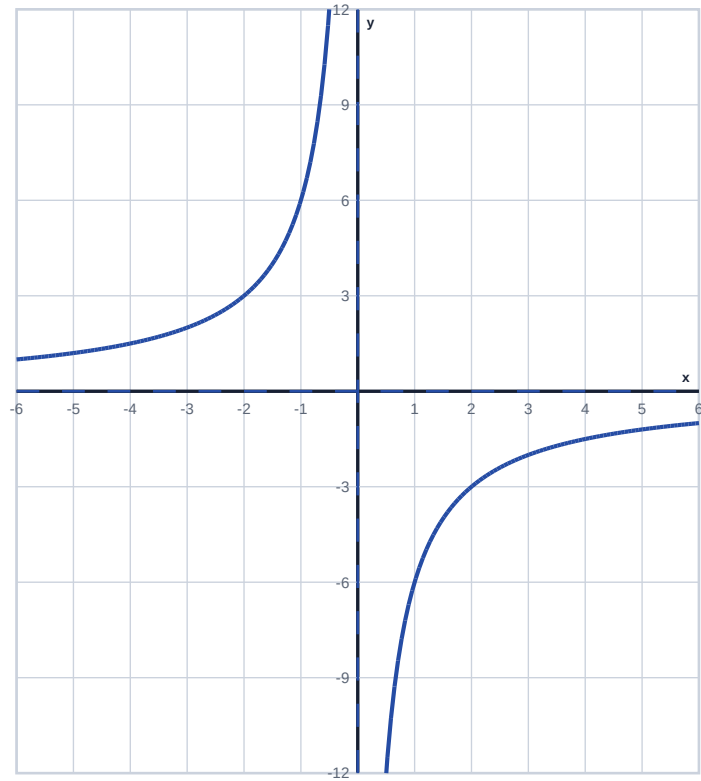
Name _____ Score _____ Teacher _____ Date _____

Graphing Simple Rational Functions
Answer Key

Find the asymptotes and intercepts, plot useful reference points, then graph each function on the blank grid.

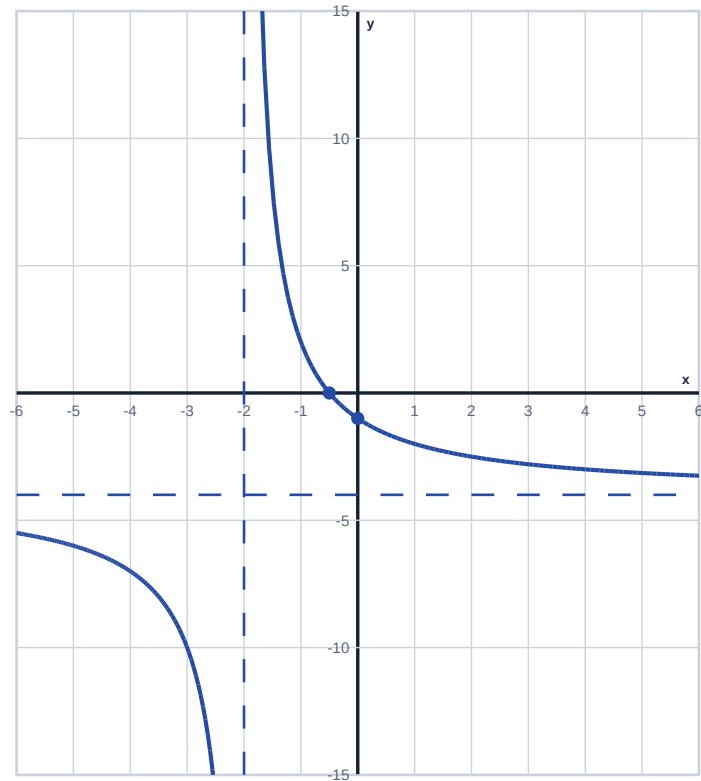
1. $f(x) = -6/x$

Original domain exclusions: $x = 0$.
Reduced form: $f(x) = (-6)/(x)$.
Vertical asymptotes: $x = 0$.
Holes: none.
 x -intercepts: none; y -intercept: undefined.
Horizontal asymptote: $y = 0$.
Reference points: $(-1, 6)$, $(1, -6)$, $(-2, 3)$, $(2, -3)$.



2. $f(x) = 6/(x + 2) - 4$

Original domain exclusions: $x = -2$.
Reduced form: $f(x) = (-4x - 2)/(x + 2)$.
Vertical asymptotes: $x = -2$.
Holes: none.
 x -intercepts: $(-1/2, 0)$; y -intercept: $(0, -1)$.
Horizontal asymptote: $y = -4$.
Reference points: $(-3, -10)$, $(-1, 2)$, $(-4, -7)$, $(0, -1)$.

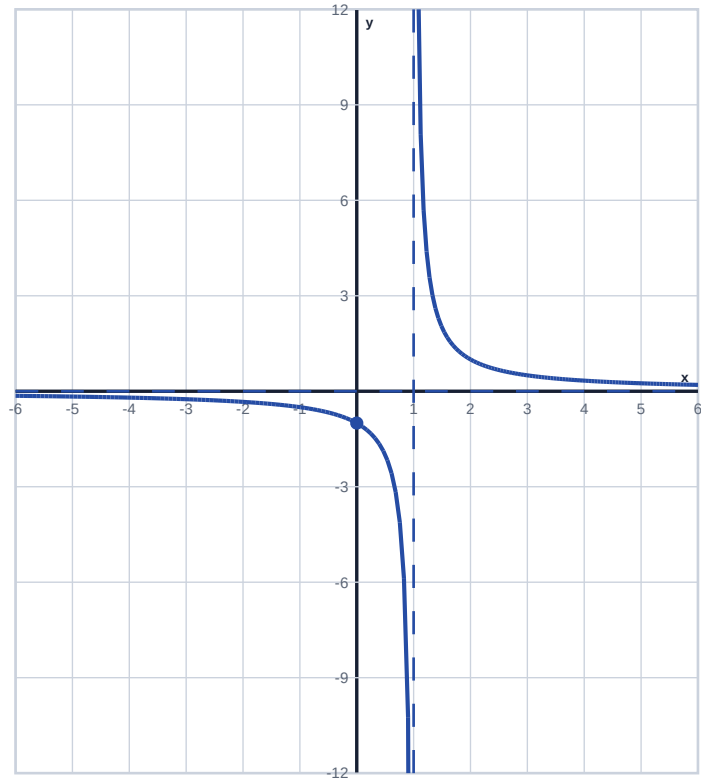


Graphing Simple Rational Functions
Answer Key

Find the asymptotes and intercepts, plot useful reference points, then graph each function on the blank grid.

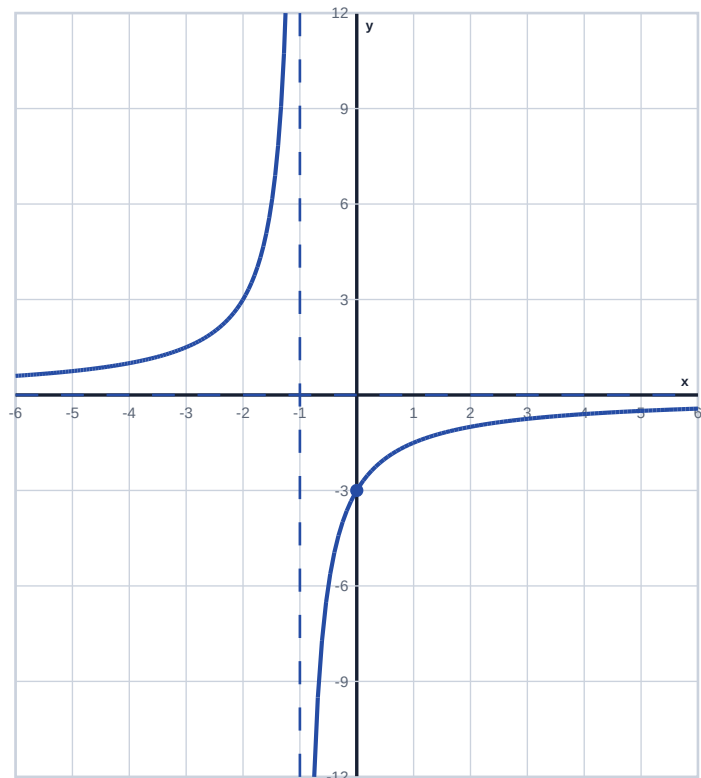
3. $f(x) = 1/(x - 1)$

Original domain exclusions: $x = 1$.
Reduced form: $f(x) = (1)/(x - 1)$.
Vertical asymptotes: $x = 1$.
Holes: none.
 x -intercepts: none; y -intercept: $(0, -1)$.
Horizontal asymptote: $y = 0$.
Reference points: $(0, -1)$, $(2, 1)$, $(-1, -1/2)$, $(3, 1/2)$.



4. $f(x) = -3/(x + 1)$

Original domain exclusions: $x = -1$.
Reduced form: $f(x) = (-3)/(x + 1)$.
Vertical asymptotes: $x = -1$.
Holes: none.
 x -intercepts: none; y -intercept: $(0, -3)$.
Horizontal asymptote: $y = 0$.
Reference points: $(-2, 3)$, $(0, -3)$, $(-3, 3/2)$, $(1, -3/2)$.

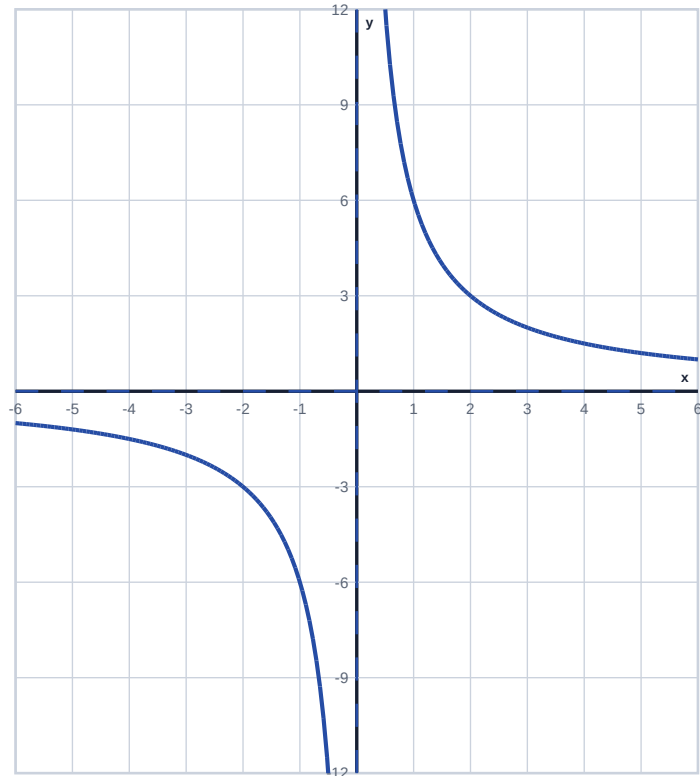


Graphing Simple Rational Functions
Answer Key

Find the asymptotes and intercepts, plot useful reference points, then graph each function on the blank grid.

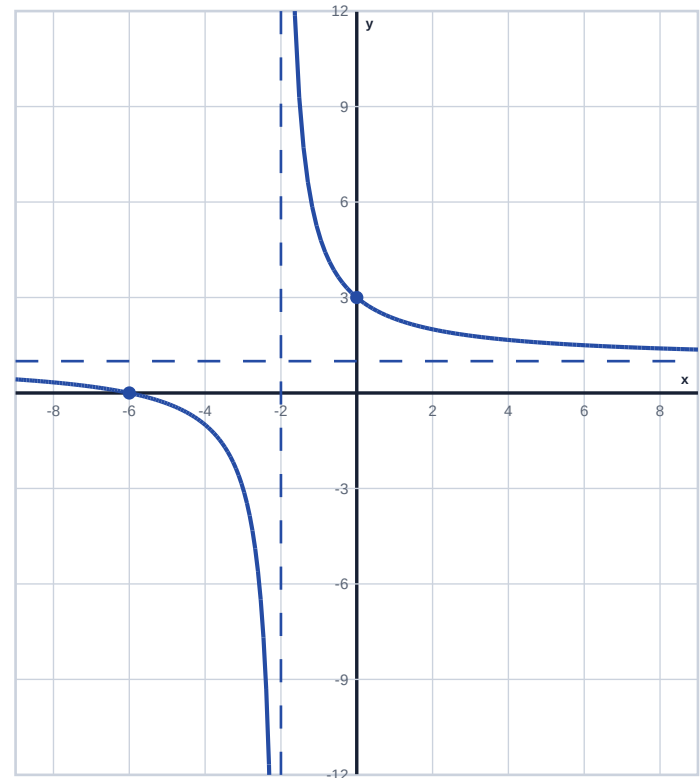
5. $f(x) = 6/x$

Original domain exclusions: $x = 0$.
Reduced form: $f(x) = (6)/(x)$.
Vertical asymptotes: $x = 0$.
Holes: none.
 x -intercepts: none; y -intercept: undefined.
Horizontal asymptote: $y = 0$.
Reference points: $(-1, -6)$, $(1, 6)$, $(-2, -3)$, $(2, 3)$.



6. $f(x) = 4/(x + 2) + 1$

Original domain exclusions: $x = -2$.
Reduced form: $f(x) = (x + 6)/(x + 2)$.
Vertical asymptotes: $x = -2$.
Holes: none.
 x -intercepts: $(-6, 0)$; y -intercept: $(0, 3)$.
Horizontal asymptote: $y = 1$.
Reference points: $(-3, -3)$, $(-1, 5)$, $(-4, -1)$, $(0, 3)$.

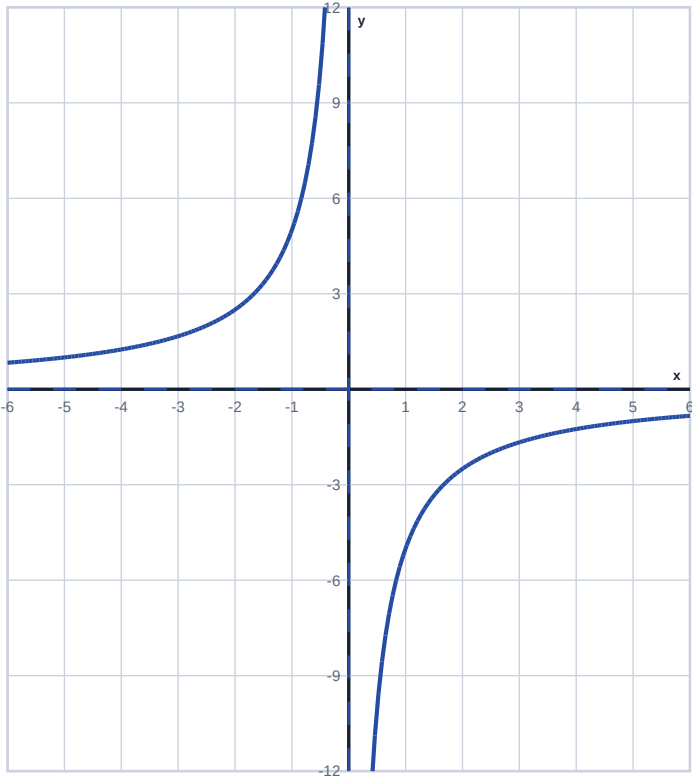


Graphing Simple Rational Functions
Answer Key

Find the asymptotes and intercepts, plot useful reference points, then graph each function on the blank grid.

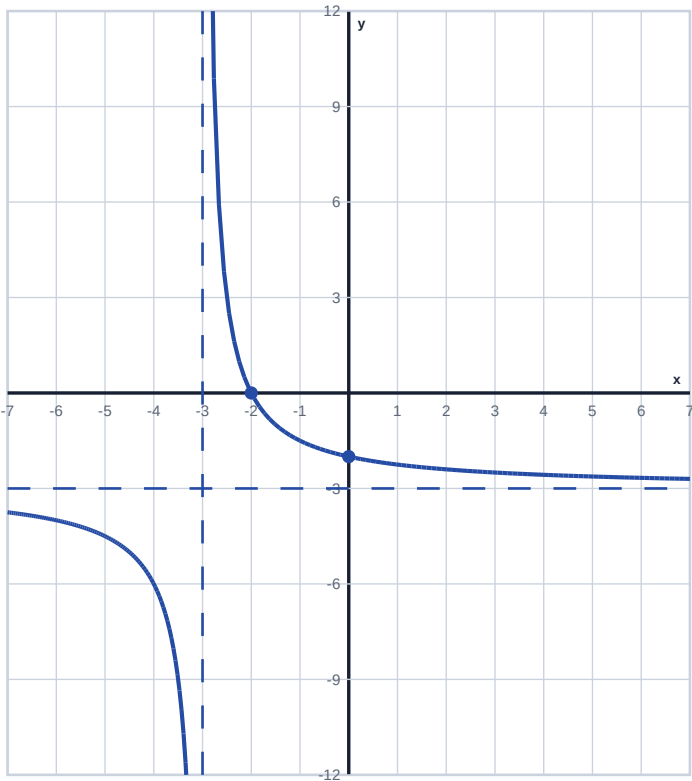
7. $f(x) = -5/x$

Original domain exclusions: $x = 0$.
Reduced form: $f(x) = (-5)/(x)$.
Vertical asymptotes: $x = 0$.
Holes: none.
 x -intercepts: none; y -intercept: undefined.
Horizontal asymptote: $y = 0$.
Reference points: $(-1, 5)$, $(1, -5)$, $(-2, 5/2)$, $(2, -5/2)$.



8. $f(x) = 3/(x + 3) - 3$

Original domain exclusions: $x = -3$.
Reduced form: $f(x) = (-3x - 6)/(x + 3)$.
Vertical asymptotes: $x = -3$.
Holes: none.
 x -intercepts: $(-2, 0)$; y -intercept: $(0, -2)$.
Horizontal asymptote: $y = -3$.
Reference points: $(-4, -6)$, $(-2, 0)$, $(-5, -9/2)$, $(-1, -3/2)$.

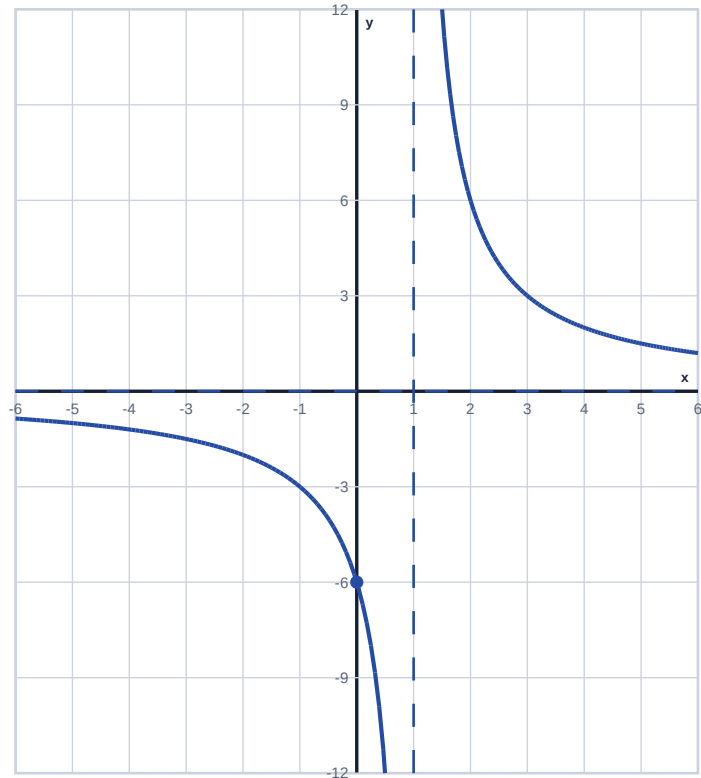


Graphing Simple Rational Functions
Answer Key

Find the asymptotes and intercepts, plot useful reference points, then graph each function on the blank grid.

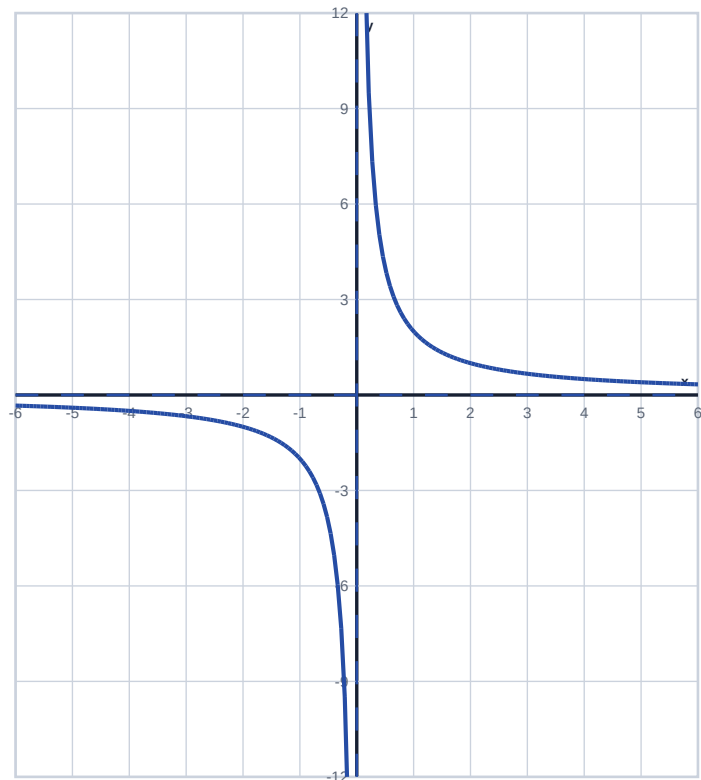
9. $f(x) = 6/(x - 1)$

Original domain exclusions: $x = 1$.
Reduced form: $f(x) = (6)/(x - 1)$.
Vertical asymptotes: $x = 1$.
Holes: none.
 x -intercepts: none; y -intercept: $(0, -6)$.
Horizontal asymptote: $y = 0$.
Reference points: $(0, -6)$, $(2, 6)$, $(-1, -3)$, $(3, 3)$.



10. $f(x) = 2/x$

Original domain exclusions: $x = 0$.
Reduced form: $f(x) = (2)/(x)$.
Vertical asymptotes: $x = 0$.
Holes: none.
 x -intercepts: none; y -intercept: undefined.
Horizontal asymptote: $y = 0$.
Reference points: $(-1, -2)$, $(1, 2)$, $(-2, -1)$, $(2, 1)$.



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Graphing Simple Rational Functions

Answer Key

Find the asymptotes and intercepts, plot useful reference points, then graph each function on the blank grid.

11. $f(x) = -2/(x - 1) - 4$

Original domain exclusions: $x = 1$.

Reduced form: $f(x) = (-4x + 2)/(x - 1)$.

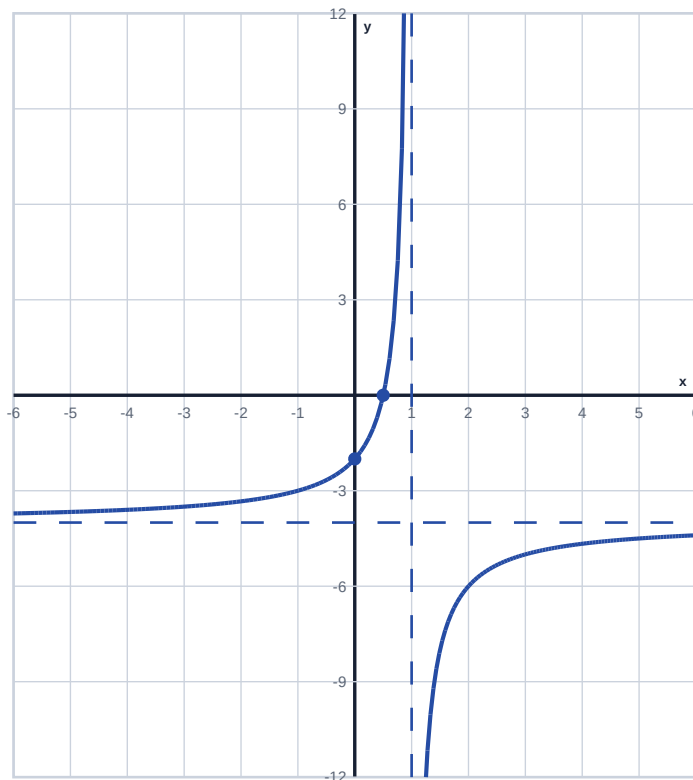
Vertical asymptotes: $x = 1$.

Holes: none.

x-intercepts: $(1/2, 0)$; y-intercept: $(0, -2)$.

Horizontal asymptote: $y = -4$.

Reference points: $(0, -2)$, $(2, -6)$, $(-1, -3)$, $(3, -5)$.



12. $f(x) = 1/(x + 1)$

Original domain exclusions: $x = -1$.

Reduced form: $f(x) = (1)/(x + 1)$.

Vertical asymptotes: $x = -1$.

Holes: none.

x-intercepts: none; y-intercept: $(0, 1)$.

Horizontal asymptote: $y = 0$.

Reference points: $(-2, -1)$, $(0, 1)$, $(-3, -1/2)$, $(1, 1/2)$.

