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← [MAC1105, section 04.06.2020, Spring 2020](#)

 INSTRUCTOR

Master Instructor

International College of Health Sciences

MidTerm Exam (Homework)

Current Score

QUESTION	1	2	3	4	5	6	7	8	9	10	11	12	
POINTS	-/2.85	-/2.85	-/2.85	-/2.85	-/2.85	-/2.85	-/2.85	-/2.85	-/2.85	-/2.85	-/2.85	-/2.85	-/2.85

TOTAL SCORE

-/100

0.0%

Due Date

SAT, APR 25, 2020
8:59 PM PDT

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Assignment Submission & Scoring

Assignment Submission

For this assignment, you submit answers by question parts. The number of submissions remaining for each question part only changes if you submit or change the answer.

Assignment Scoring

Your last submission is used for your score.

1.

-2.85 POINTS

LARCOLALG10 1.2.001.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

A(n) is a statement that equates two algebraic expressions.

Need Help?

Read It

2.

-2.85 POINTS

LARCOLALG10 1.2.004.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

 equation has the same solution(s) as the original equation.

Need Help?

Read It

3.

-2.85 POINTS

LARCOLALG10 1.7.002.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

The set of all points on the real number line that represents the solution set of an inequality is the of the inequality.

Need Help?

Read It

4.

-2.85 POINTS

LARCOLALG10 1.7.005.

MY NOTES

ASK YOUR TEACHER

Write an inequality that represents the interval.

 $[-7, 8)$

- ☐ $-7 < x \leq 8$
- ☐ $-7 \leq x < 8$
- ☐ $x \leq -7, x > 8$
- ☐ $-7 < x < 8$
- ☐ $-7 \leq x \leq 8$

State whether the interval is bounded or unbounded.

- ☐ bounded
- ☐ unbounded

Need Help?

Read It

5.

-2.85 POINTS

LARCOLALG10 2.1.002.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

For a line, the ratio of the change in y to the change in x is called the of the line.

Need Help?

Read It

6.

-2.85 POINTS

LARCOLALG10 2.1.006.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

When the x -axis and y -axis have different units of measure, the slope can be interpreted as a .

Need Help?

Read It

7.

-2.85 POINTS

LARCOLALG10 2.4.001.

MY NOTES

ASK YOUR TEACHER

Match the function with its name.

$$f(x) = \lceil x \rceil$$

- ☐ absolute value function
- ☐ reciprocal function
- ☐ linear function
- ☐ step function
- ☐ identity function

Need Help?

Read It

8.

-2.85 POINTS

LARCOLALG10 2.4.007.

MY NOTES

ASK YOUR TEACHER

Match the function with its name.

$$f(x) = |x|$$

- ☐ cubic function
- ☐ square root function
- ☐ linear function
- ☐ absolute value function
- ☐ constant function

Need Help?

Read It

9.

-2.85 POINTS

LARCOLALG10 2.4.009.

MY NOTES

ASK YOUR TEACHER

Match the function with its name.

$$f(x) = ax + b$$

- ☐ absolute value function
- ☐ constant function
- ☐ identity function
- ☐ cubic function
- ☐ linear function

Need Help?

Read It

10. -/2.85 POINTS LARCOLALG10 3.2.001.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

The graph of a polynomial function is , which means that the graph has no breaks, holes, or gaps.

Need Help?

Read It

11. -/2.85 POINTS LARCOLALG10 3.2.007.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

A polynomial function is written in form when its terms are written in descending order of exponents from left to right.

Need Help?

Read It

12. -/2.85 POINTS LARCOLALG10 3.4.002.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

The states that if $f(x)$ is a polynomial of degree n ($n > 0$), then f has precisely n linear factors, $f(x) = a_n(x - c_1)(x - c_2) \cdots (x - c_n)$, where $c_1, c_2, \dots, c_n$ are complex numbers.

Need Help?

Read It

13. -/2.85 POINTS LARCOLALG10 3.5.001.

MY NOTES

ASK YOUR TEACHER

Fill in the blanks.

Two techniques for fitting models to data are direct and inverse and least squares .

Need Help?

Read It

14. -/2.85 POINTS LARCOLALG10 3.5.003.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

The linear model with the least sum of the squared differences is called the line.

Need Help?

Read It

15.

-2.85 POINTS

LARCOLALG10 4.1.003.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

When $f(x) \rightarrow b$ as $x \rightarrow \pm\infty$, $y = b$ is a ---Select--- of the graph of f .

Need Help?

Read It

16.

-2.85 POINTS

LARCOLALG10 4.1.006.

MY NOTES

ASK YOUR TEACHER

Find the domain of the function.

$$f(x) = \frac{5}{x + 7}$$

- ☐ all real numbers x such that $x > -7$
- ☐ all real numbers x such that $x \leq -7$
- ☐ all real numbers x such that $x < -7$
- ☐ all real numbers x such that $x \geq -7$
- ☐ all real numbers x except $x = -7$

Discuss the behavior of f near any excluded x -values.

- ☐ $f(x) \rightarrow -\infty$ as $x \rightarrow -7^-$, $f(x) \rightarrow \infty$ as $x \rightarrow -7^+$
- ☐ $f(x) \rightarrow \infty$ as $x \rightarrow -7^-$, $f(x) \rightarrow -\infty$ as $x \rightarrow -7^+$
- ☐ $f(x) \rightarrow -\infty$ as $x \rightarrow -7^-$, $f(x) \rightarrow -\infty$ as $x \rightarrow -7^+$
- ☐ $f(x) \rightarrow 0$ as $x \rightarrow -7^-$, $f(x) \rightarrow 0$ as $x \rightarrow -7^+$
- ☐ $f(x) \rightarrow \infty$ as $x \rightarrow -7^-$, $f(x) \rightarrow \infty$ as $x \rightarrow -7^+$

Need Help?

Read It

17.

-2.85 POINTS

LARCOLALG10 4.1.009.

MY NOTES

ASK YOUR TEACHER

Find the domain of the function.

$$f(x) = \frac{3x^2}{x^2 - 9}$$

- ☐ all real numbers x such that $x \leq -3$
- ☐ all real numbers x except $x = 3$
- ☐ all real numbers x except $x = \pm 3$
- ☐ all real numbers x except $x = -3$
- ☐ all real numbers x such that $x \geq 3$

Discuss the behavior of f near any excluded x -values.

- ☐ $f(x) \rightarrow -\infty$ as $x \rightarrow -3^-$ and as $x \rightarrow 3^+$, $f(x) \rightarrow -\infty$ as $x \rightarrow -3^+$ and as $x \rightarrow 3^-$
- ☐ $f(x) \rightarrow \infty$ as $x \rightarrow -3^-$ and as $x \rightarrow 3^+$, $f(x) \rightarrow \infty$ as $x \rightarrow -3^+$ and as $x \rightarrow 3^-$
- ☐ $f(x) \rightarrow \infty$ as $x \rightarrow -3^-$ and as $x \rightarrow 3^+$, $f(x) \rightarrow -\infty$ as $x \rightarrow -3^+$ and as $x \rightarrow 3^-$
- ☐ $f(x) \rightarrow \infty$ as $x \rightarrow -3^-$, $f(x) \rightarrow \infty$ as $x \rightarrow -3^+$
- ☐ $f(x) \rightarrow -\infty$ as $x \rightarrow -3^-$ and as $x \rightarrow 3^+$, $f(x) \rightarrow \infty$ as $x \rightarrow -3^+$ and as $x \rightarrow 3^-$

Need Help?

Read It

18.

-2.85 POINTS

LARCOLALG10 5.1.001.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

Polynomial and rational functions are examples of ---Select--- functions.

Need Help?

Read It

19.

-2.85 POINTS

LARCOLALG10 5.1.005.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

To find the amount A in an account after t years with principal P and an annual interest rate r (in decimal form) compounded n times per year, use the formula

Need Help?

Read It

20.

-2.85 POINTS

LARCOLALG10 5.3.001.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

You can evaluate logarithms to any base using the ---Select--- formula.

Need Help?[Read It](#)

21.

-2.85 POINTS

LARCOLALG10 5.3.004.

MY NOTES

ASK YOUR TEACHER

Name the property of logarithms illustrated by each statement.

(a) $\ln(uv) = \ln(u) + \ln(v)$

- ☐ Addition Property
- ☐ Power Property
- ☐ Product Property
- ☐ Quotient Property
- ☐ Subtraction Property

(b) $\log_a(u^n) = n \log_a(u)$

- ☐ Addition Property
- ☐ Power Property
- ☐ Product Property
- ☐ Quotient Property
- ☐ Subtraction Property

(c) $\ln\left(\frac{u}{v}\right) = \ln(u) - \ln(v)$

- ☐ Addition Property
- ☐ Power Property
- ☐ Product Property
- ☐ Quotient Property
- ☐ Subtraction Property

Need Help?[Read It](#)

22. -/2.85 POINTS LARCOLALG10 6.1.001.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

A(n) of a system of equations is an ordered pair that satisfies each equation in the system.

Need Help?

Read It

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23. -/2.85 POINTS LARCOLALG10 1.8.001.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

Between two consecutive zeros, a polynomial must be .

Need Help?

Read It

24. -/2.85 POINTS LARCOLALG10 1.8.004.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

The formula that relates cost, revenue, and profit is .

Need Help?

Read It

25. -/2.85 POINTS LARCOLALG10 2.3.001.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

The is used to determine whether the graph represents y as a function of x .

Need Help?

Read It

Watch It

26. -/2.85 POINTS LARCOLALG10 2.5.003.

MY NOTES

ASK YOUR TEACHER

Fill in the blanks.

A nonrigid transformation of the graph of $y = f(x)$ represented by $g(x) = cf(x)$ is a when $c > 1$ and a when $0 < c < 1$.

Need Help?

Read It

27. **-/2.85 POINTS** **LARCOLALG10 2.7.001.**[MY NOTES](#)[ASK YOUR TEACHER](#)

Fill in the blank.

If $f(g(x))$ and $g(f(x))$ both equal x , then the function g is the function of the function f .**Need Help?**[Read It](#)28. **-/2.85 POINTS** **LARCOLALG10 2.7.004.**[MY NOTES](#)[ASK YOUR TEACHER](#)

Fill in the blank.

The graphs of f and f^{-1} are reflections of each other in the line .**Need Help?**[Read It](#)29. **-/2.85 POINTS** **LARCOLALG10 3.5.002.**[MY NOTES](#)[ASK YOUR TEACHER](#)

Fill in the blank.

Statisticians use a measure called the to find a model that approximates a set of data most accurately.**Need Help?**[Read It](#)30. **-/2.85 POINTS** **LARCOLALG10 3.5.007.**[MY NOTES](#)[ASK YOUR TEACHER](#)

Fill in the blank.

Mathematical models that involve both direct and inverse variation have variation.**Need Help?**[Read It](#)31. **-/2.85 POINTS** **LARCOLALG10 3.1.001.**[MY NOTES](#)[ASK YOUR TEACHER](#)

Fill in the blank.

Linear, constant, and squaring functions are examples of functions.**Need Help?**[Read It](#)

32.

-2.85 POINTS

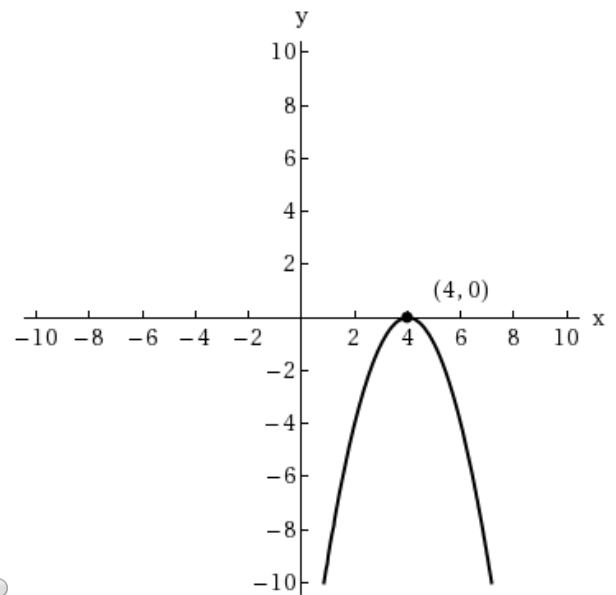
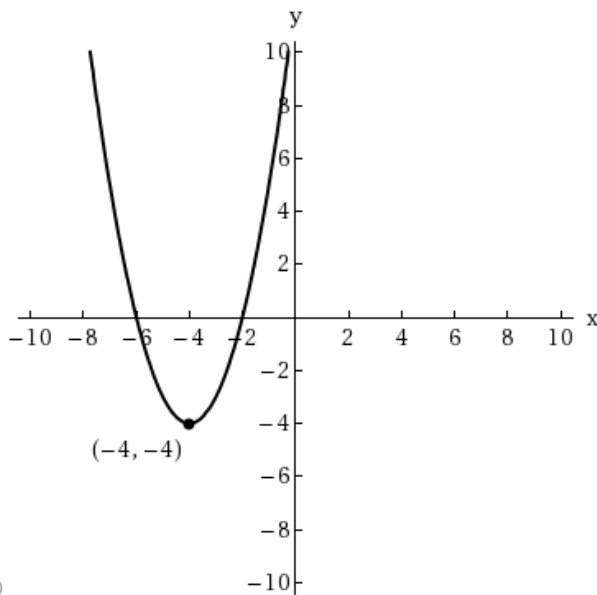
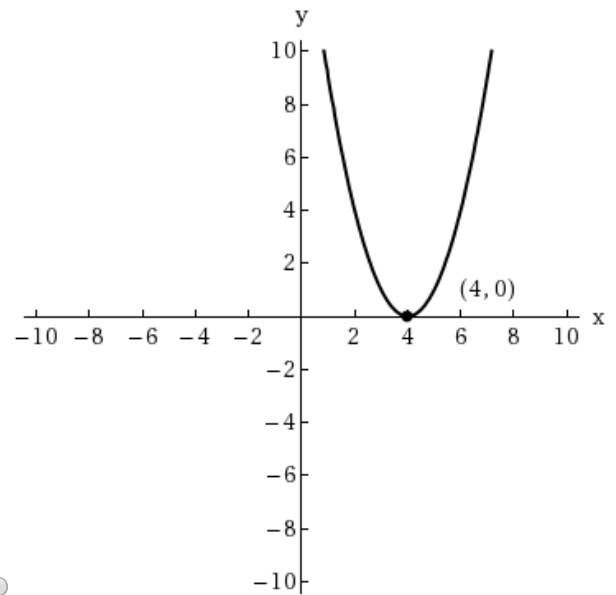
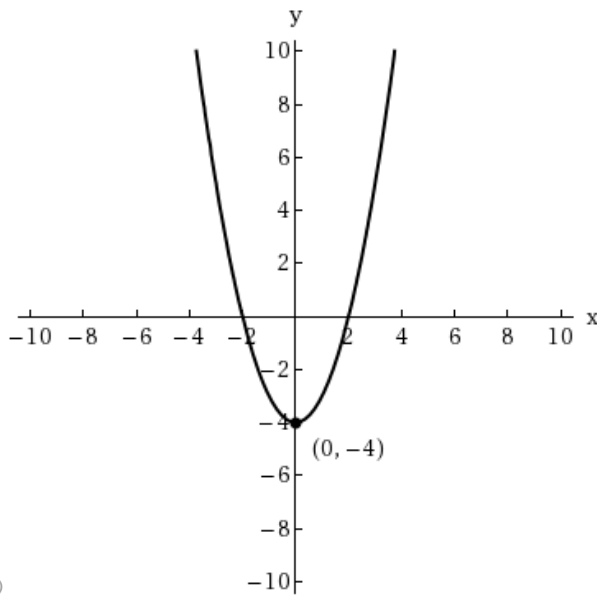
LARCOLALG10 3.1.005.

MY NOTES

ASK YOUR TEACHER

Match the quadratic function with its graph.

$$f(x) = x^2 - 4$$



Need Help?

Read It

33.

-2.85 POINTS

LARC0LALG10 4.2.001.

MY NOTES

ASK YOUR TEACHER

Fill in the blank.

For the rational function given by $f(x) = N(x)/D(x)$, if the degree of $N(x)$ is exactly one more than the degree of $D(x)$, then the graph of f has a .

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[Read It](#)

34.

-2.85 POINTS

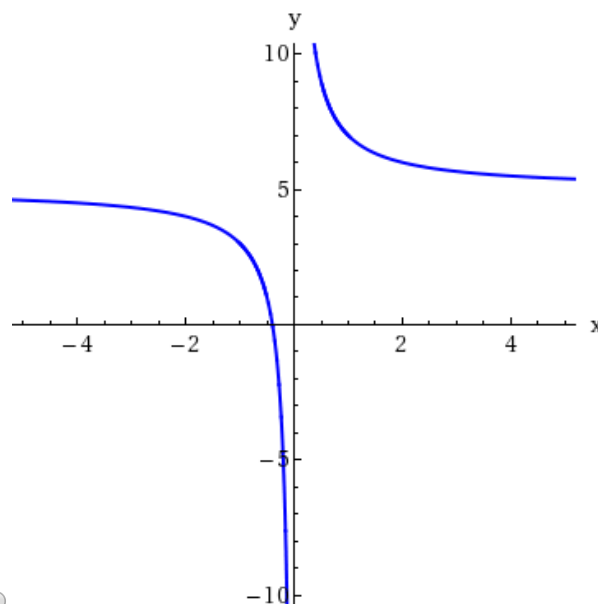
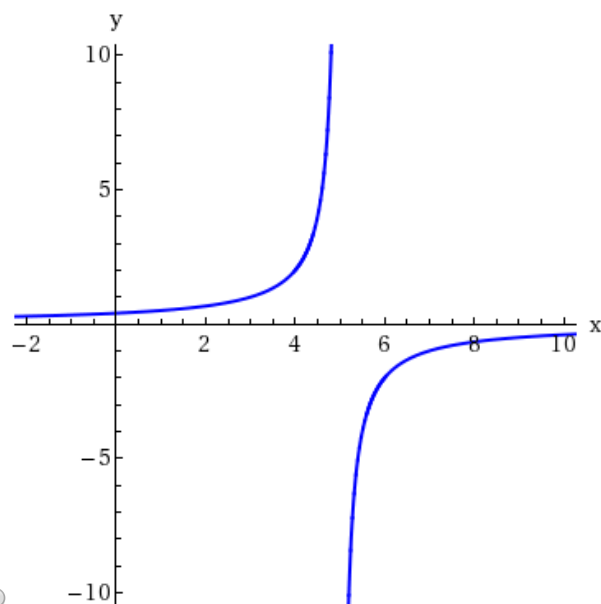
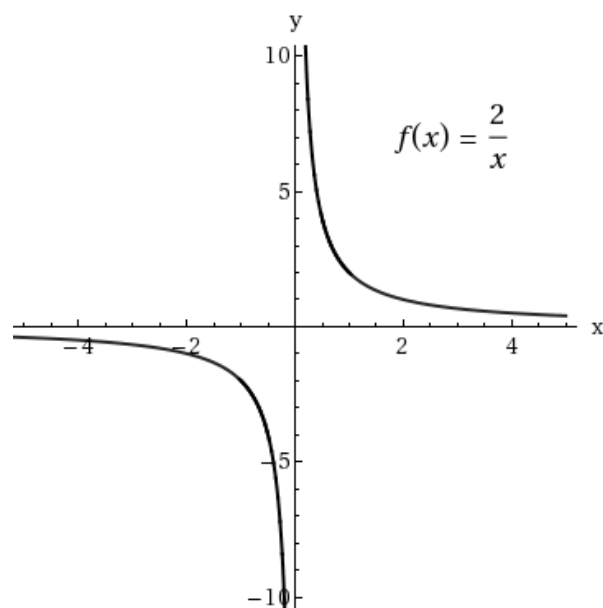
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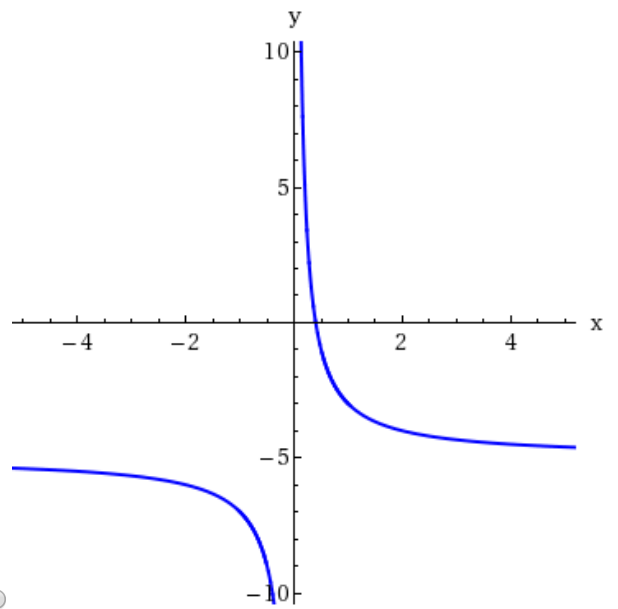
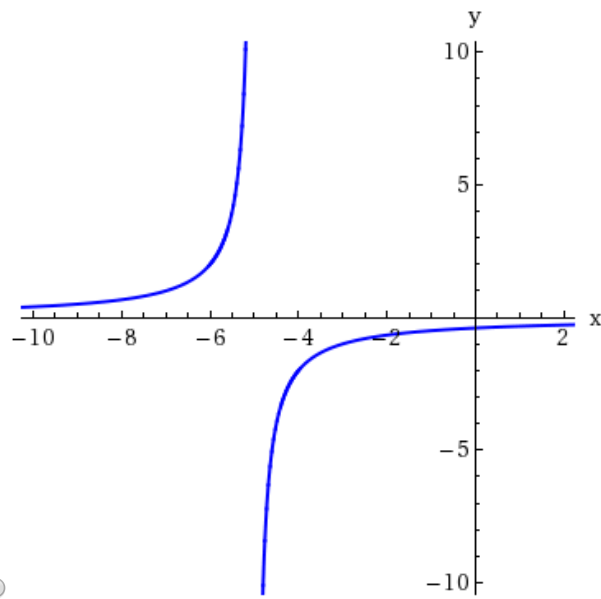
MY NOTES

ASK YOUR TEACHER

Use the graph of $f(x) = \frac{2}{x}$ to sketch the graph of g .

$$g(x) = \frac{2}{x} + 5$$





Need Help?

Read It

35.

-3.1 POINTS

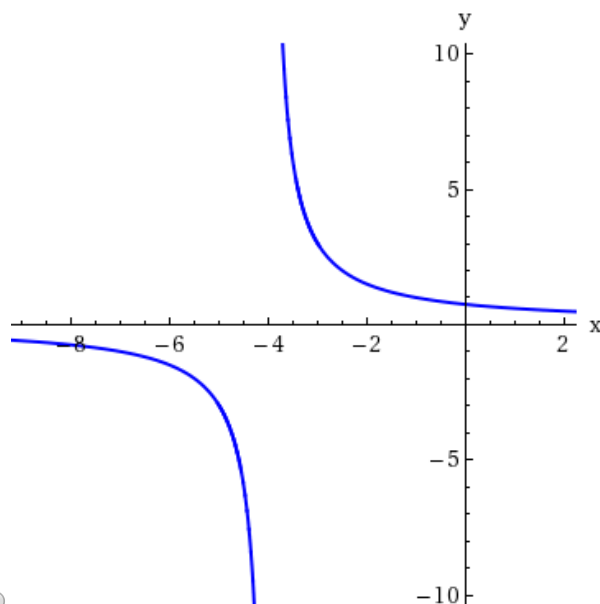
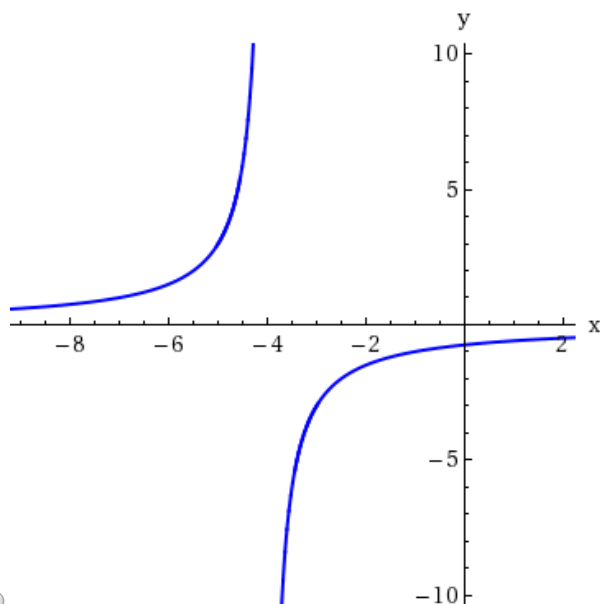
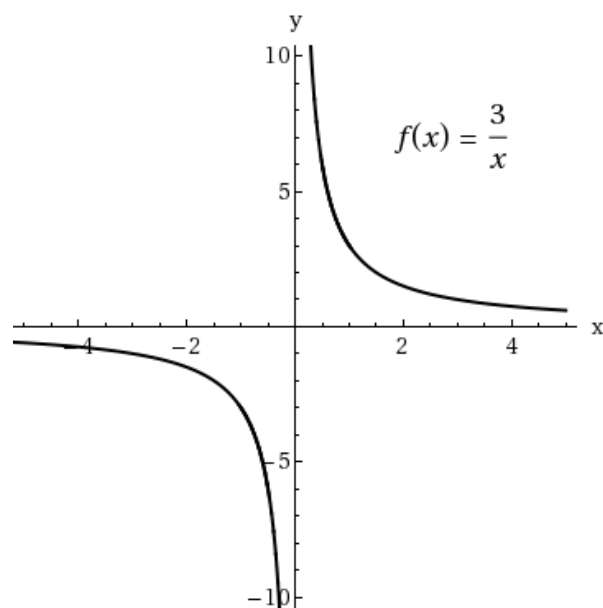
LARCOLALG10 4.2.004.

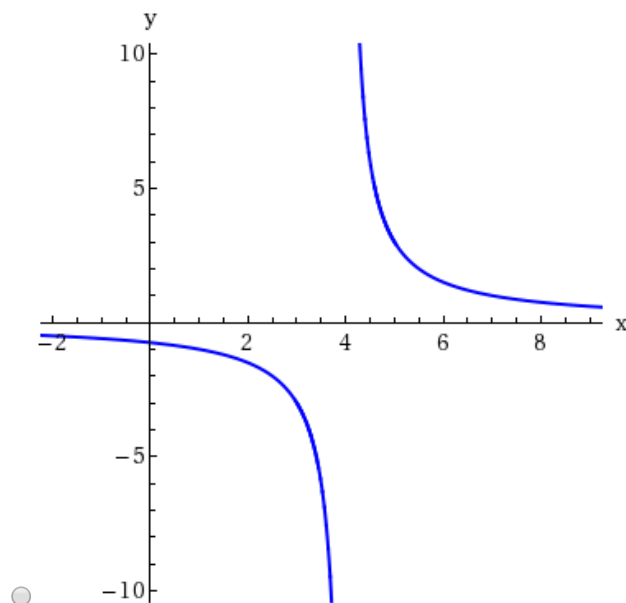
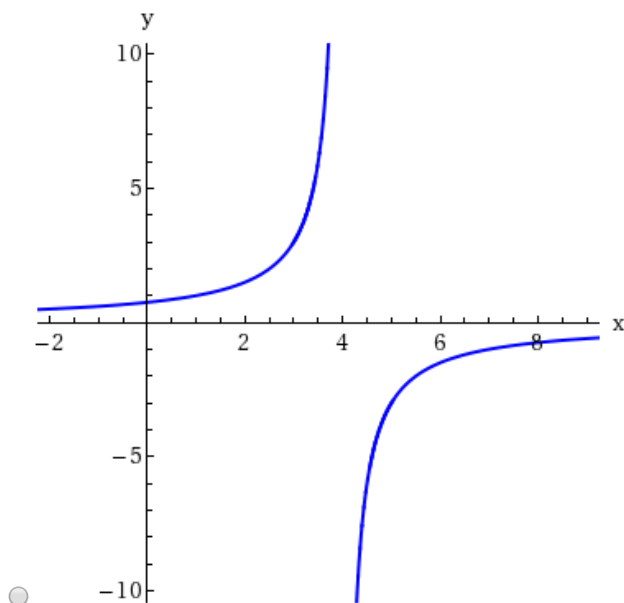
MY NOTES

ASK YOUR TEACHER

Use the graph of $f(x) = \frac{3}{x}$ to sketch the graph of g .

$$g(x) = \frac{3}{x-4}$$





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