

☐ View hints ☐ View feedback

 Play All 

QUESTION 1



Fill in the blank(s) with the correct answer.

What are the asymptotes of

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

? Use the tables to find the asymptotes of the function.

Fill in UN for undefined. Round to the nearest ten-thousandth if needed.

x	- 2.1	- 2.01	- 2.001	- 2
$f(x)$	31	301	3001 ✓	UN ✓

x	- 10,000	- 1000	- 100	0	100	1000	
$f(x)$	1.0003 ✓	1.0030	1.0306	0.5	0.9706	0.9970	0.9999 ✓

vertical asymptote:

$x =$

-2 ✓

horizontal asymptote:

$y =$

1 ✓

QUESTION 2



Fill in the blank(s) with the correct answer.

Find the asymptotes of the function

$$f(x) = \frac{3x - 2}{4x + 12}$$

using the tables.

Fill in UN for undefined. Round to the nearest ten-thousandth if needed.

x	- 3 . 1	- 3 . 01	- 3 . 001	- 3	- 2 . 999	- 2 . 9
$f(x)$	28.25	275.75	2750.75	UN ✓	- 2749 . 25	- 274

x	- 10 , 000	- 1000	- 100	0	100	1000	
$f(x)$	0.7503 ✓	0.7528	0.7784	- 0 . 1667	0.7233	0.7473	0

vertical asymptote:

$x =$

- 3 ✓

horizontal asymptote:

$y =$

0 . 75 ✓

QUESTION 3



Fill in the blank(s) with the correct answer.

Use the tables to find the asymptotes of

$$f(x) = \frac{2x - 1}{x - 4}$$

Fill in UN for undefined. Round to the nearest ten-thousandth if needed.

x	3.9	3.99	3.999	4
f(x)	-68	-698	-6998 ✓	UN ✓

x	-10,000	-1000	-100	0	100	1000	10,000
f(x)	1.9993 ✓	1.9930	1.9327	0.25	2.0729	2.0070	2.0000

vertical asymptote:

x =

4 ✓

horizontal asymptote:

y =

2 ✓

QUESTION 4



Drag and drop the correct answer into the space(s) provided.

Find the asymptotes of

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

using the tables.

x							
---	--	--	--	--	--	--	--

	- 5.1	- 5.01	- 5.001	- 5	- 4.999	- 4.99	- 4.9
f(x)	- 50	- 500	- 5000	undefined	5000	500	50

x	- 10,000	- 1000	- 100	0	100	1000	10,000
f(x)	- 0.0005	- 0.0050	- 0.0526	1	0.0476	0.0050	0.0005

vertical asymptote:

x =

- 5

✓

horizontal asymptote:

y =

0

✓

5

1

QUESTION 5



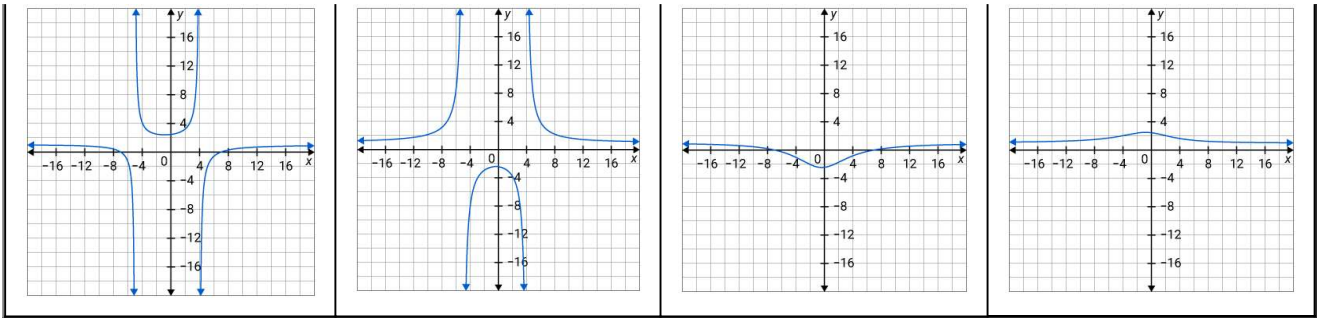
Drag and drop the correct answer into the space(s) provided.

Which is the graph of

$f(x) = \frac{x^2 + 49}{x^2 + x - 20}$

?

Graph A	Graph B	Graph C	Graph D



The graph of

$$f(x) = \frac{x^2 + 49}{x^2 + x - 20}$$

is Graph B ✓

- Graph C
- Graph D
- Graph A

QUESTION 6



Drag and drop the correct answer into the space(s) provided.

What are the asymptotes of the function

$$f(x) = \frac{3x + 1}{x}$$

?

x	-0.1	-0.01	-0.001	0	0.001	0.01	0.1
f(x)	-7	-97	-997	undefined	1003	103	13

x	-10,000	-1000	-100	1	100	1000	10,000
f(x)	2.9999	2.999	2.99	4	3.01	3.001	3.0001

vertical asymptote:

$x =$

0

✓

horizontal asymptote:

$y =$

3

✓

1

4

-3

QUESTION 7



Drag and drop the correct answer into the space(s) provided.

Determine the graph of

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

.

Graph A	Graph B	Graph C	Graph D

The graph of

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

is Graph D



Graph B

Graph C

Graph A

QUESTION 8



Choose the correct answer from the drop-down menu.

Determine the asymptotes of

$$f(x) = \frac{9x^2 - 12}{x^2 - 1}$$

.

vertical asymptote(s):

and



horizontal asymptote:

y = 9



QUESTION 9



Choose the correct answer from the drop-down menu.

What are the asymptotes of

$$f(x) = \frac{12x^2 - 1}{2x^2 + 8}$$

?

vertical asymptote:

none ✓ ▼

horizontal asymptote:

 $y = 6$ ✓ ▼

QUESTION 10

*Choose the correct answer from the drop-down menu.*

Find the asymptotes of

$$f(x) = \frac{4x^3 - 10}{2x^2 + 2}$$

.

vertical asymptote:

none ✓ ▼

horizontal asymptote:

none ✓ ▼

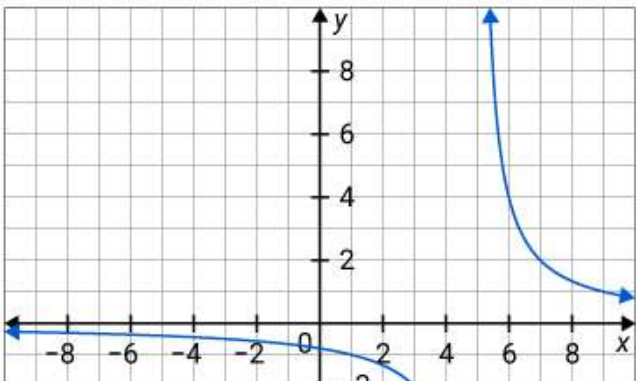
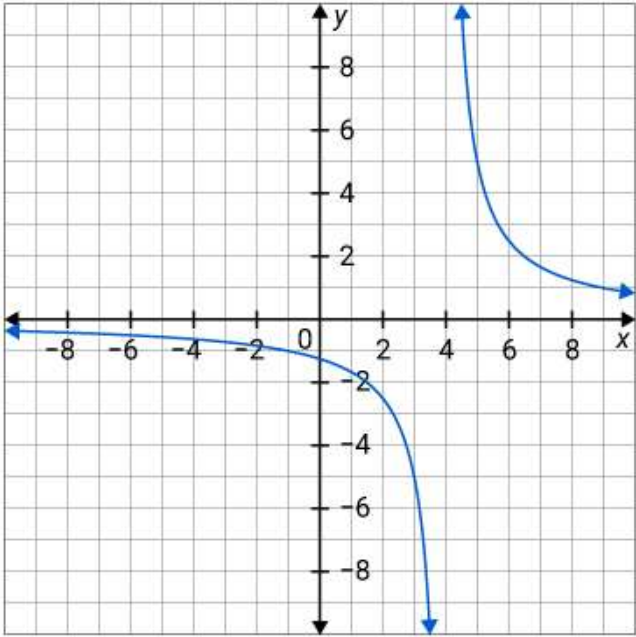
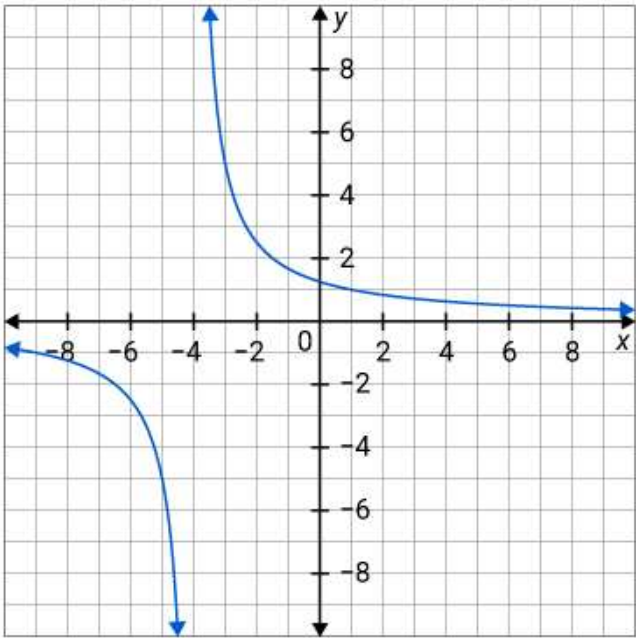
QUESTION 11

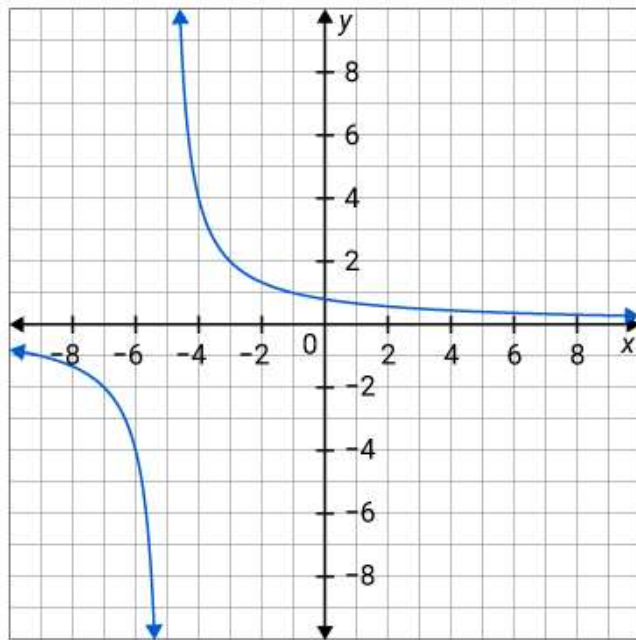
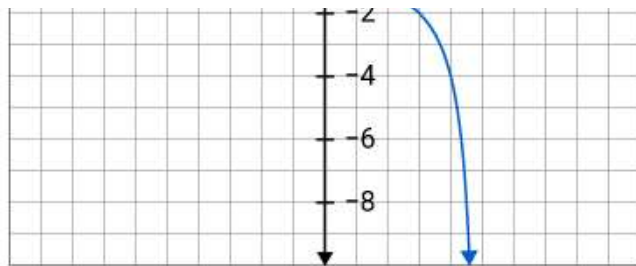
*Select the correct option.*

Graph the function

$$f(x) = \frac{5}{x + 4}$$

.





QUESTION 12

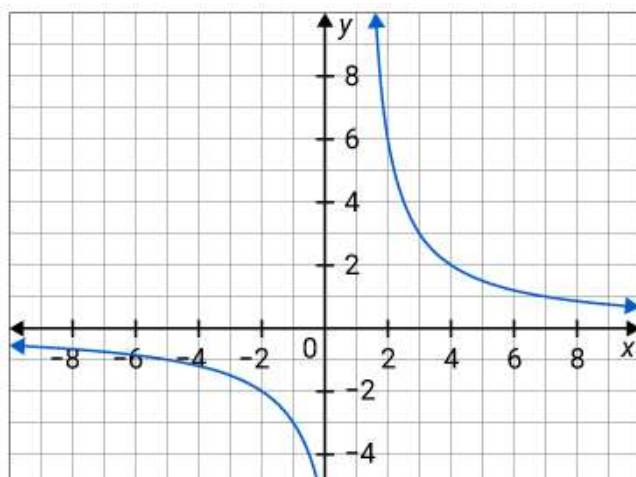
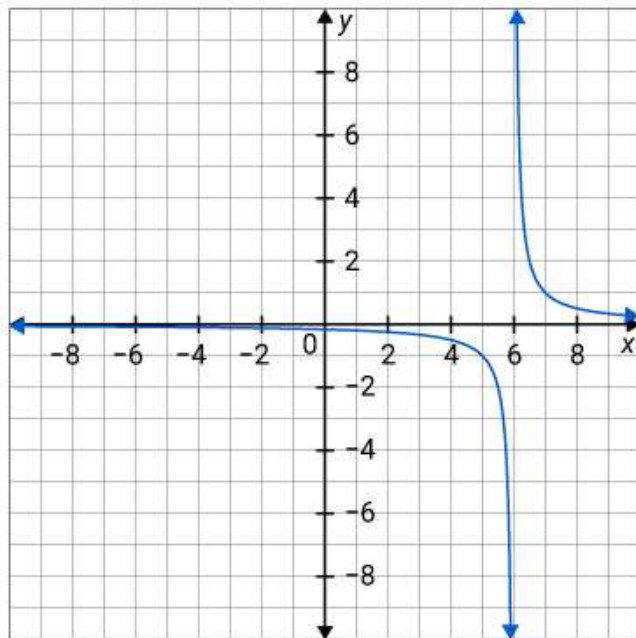
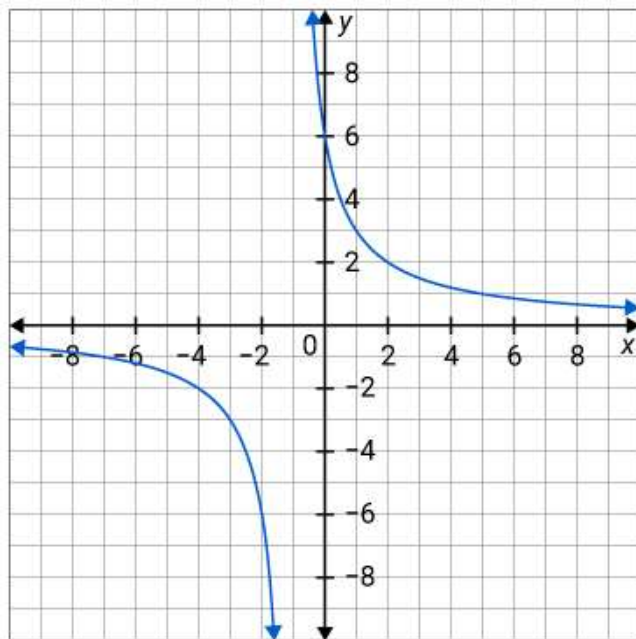


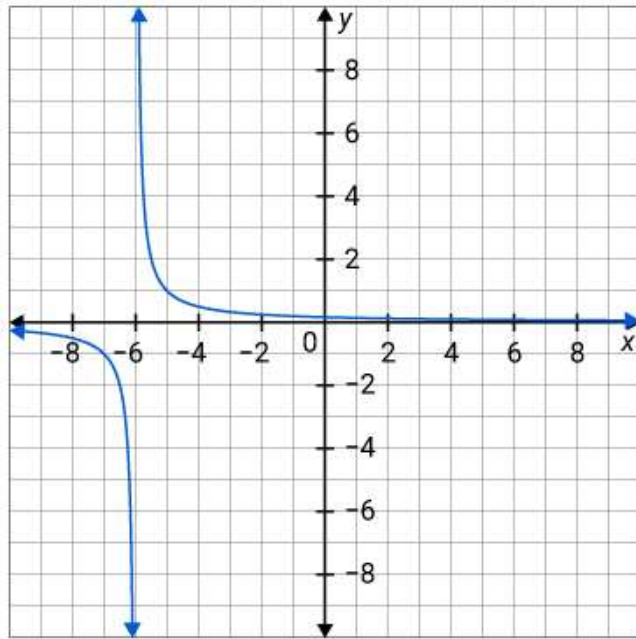
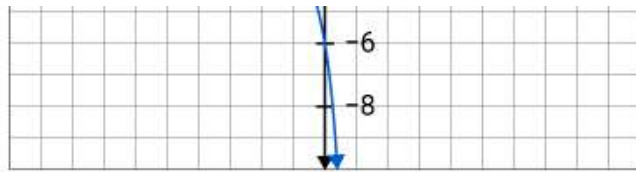
Select the correct option.

Choose the graph of the function

$$y = \frac{6}{x - 1}$$

.





QUESTION 13

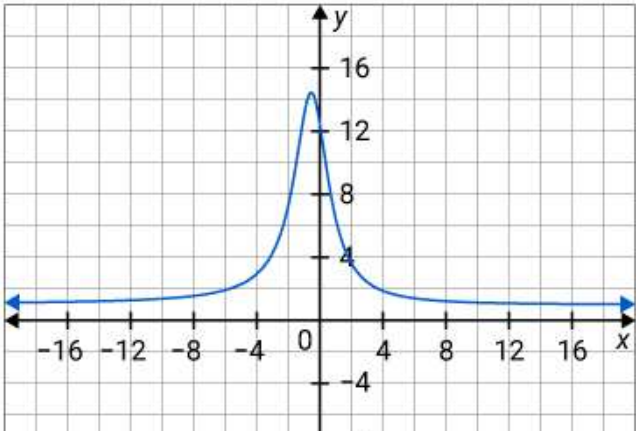
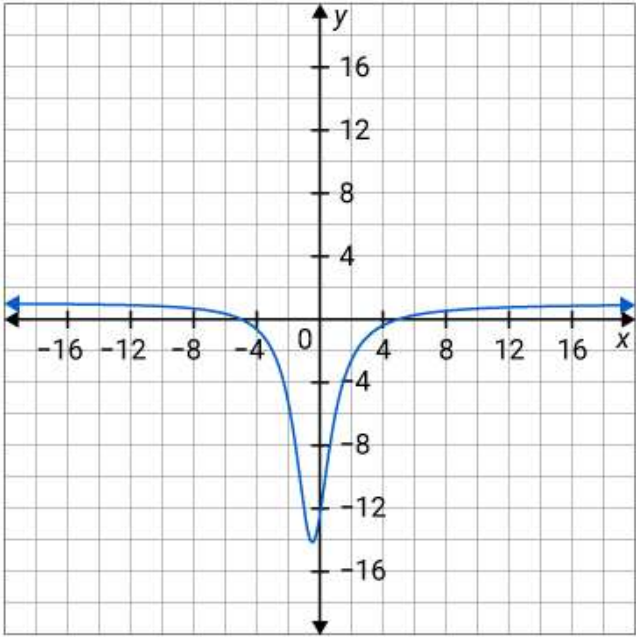
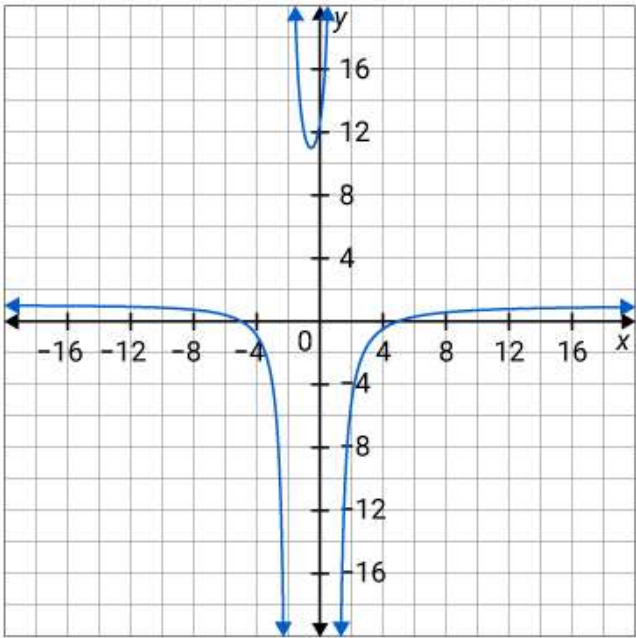


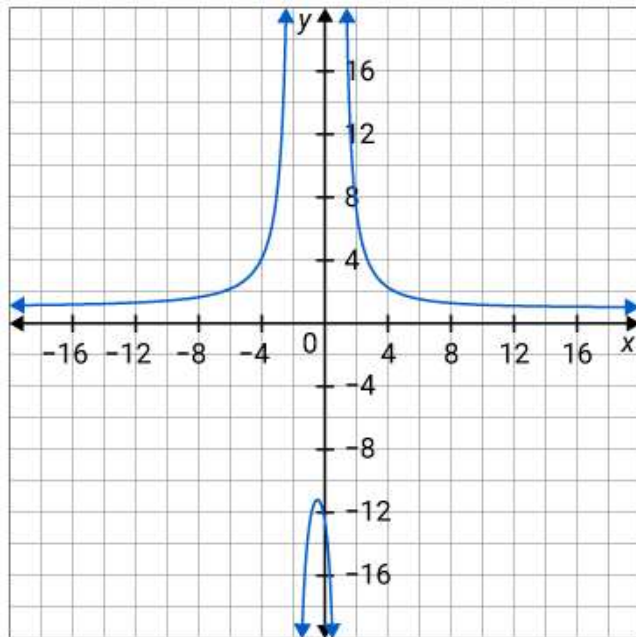
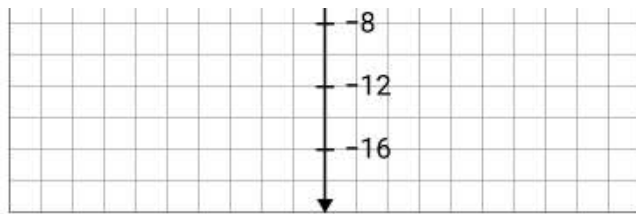
Select the correct option.

Which graph shows the function

$$f(x) = \frac{x^2 - 25}{x^2 + x - 2}$$

?





QUESTION 14



Select the correct option.

What are the asymptotes of

$$f(x) = \frac{8x^2 - 5}{4x^2 - 16}$$

?

There is no vertical asymptote.

The horizontal asymptote is

$$y = 8$$

.



vertical asymptote are:

$$x = 2$$

.

horizontal asymptote is

$$y = 2$$

.



The vertical asymptote is

$$x = \frac{5}{8}$$

.

The horizontal asymptote is

$$y = 4$$

.

Vertical asymptotes:

$$x = 2 \text{ and } x = -2$$

The horizontal asymptote is

$$y = 2$$

.



QUESTION 15



Select the correct option.

Choose the statements that describe the asymptotes of the function

$$f(x) = \frac{10x^2 - 20}{2x^2 + 8}$$

.

The vertical asymptotes are

$$x = -2$$



and

$$x = 2$$

.

The function has no horizontal asymptote.



The vertical asymptotes are

$$x = -2$$

and

$$x = 2$$

.

The horizontal asymptote is

$$y = 2$$

.



The function has no vertical asymptote.

The horizontal asymptote is

$$y = 10$$

.

The function has no vertical asymptote.

The horizontal asymptote is

$$y = 5$$

.

