***Solution*** ***Section* 1.4 – Limits at Infinity**

***Exercise***

Find the limit as  and as  of 

***Solution***





***Exercise***

Find the limit as  and as  of 

***Solution***









***Exercise***

Find the limit as  and as  of 

***Solution***









***Exercise***

Find the limit as  and as  of 

***Solution***











***Exercise***

Find the limit as  and as  of 

***Solution***









***Exercise***

Find the limit as  and as  of 

***Solution***











***Exercise***

Find the limit as  and as  of 

***Solution***









***Exercise***

Find 

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 *By the Sandwich Theorem*

***Exercise***

Find 

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***Exercise***

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***Solution***



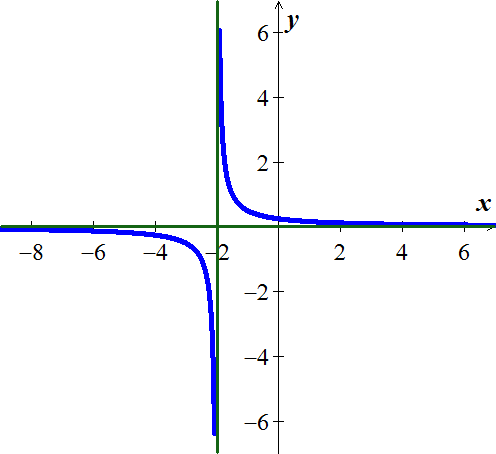
***Exercise***

Graph the rational function . Include the equations of the asymptotes.

***Solution***

***VA***: 

***HA***: 



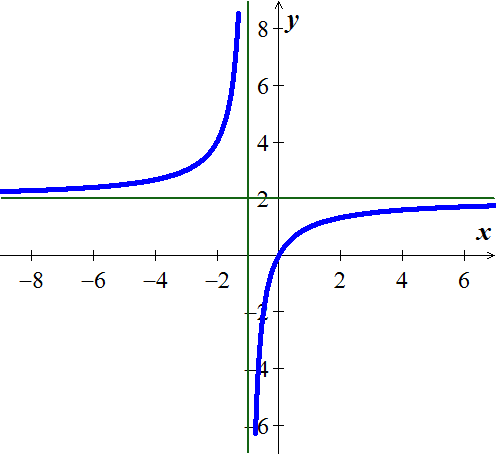
***Exercise***

Graph the rational function . Include the equations of the asymptotes.

***Solution***

***VA***: 

***HA***: 



***Exercise***

Graph the rational function . Include the equations of the asymptotes.

***Solution***

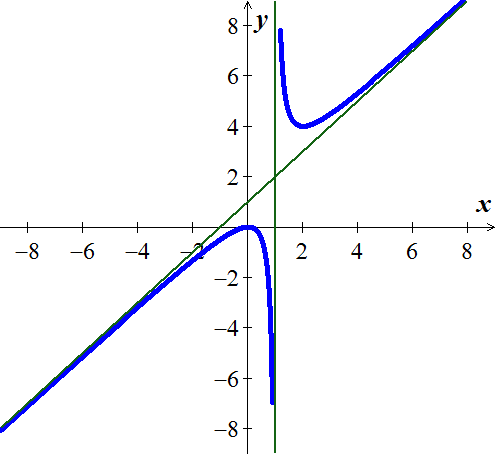






***VA***: 

***Oblique Asymptote***: 



***Exercise***

Graph the rational function . Include the equations of the asymptotes.

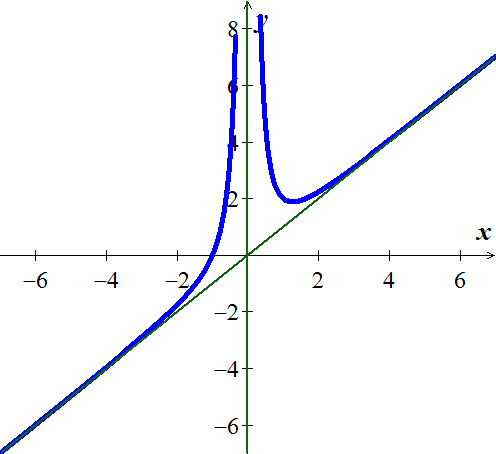
***Solution***





***VA***: 

***Oblique Asymptote***: 

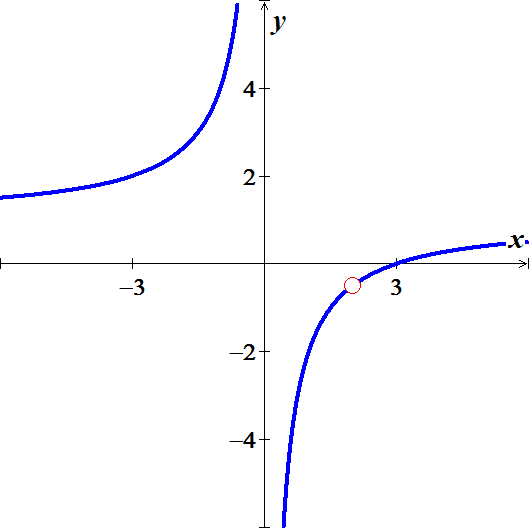


***Exercise***

Let 

1. Analyze ,, , and 
2. Does the graph of *f* have any vertical asymptotes? Explain?

***Solution***







1. 























1.  

***Exercise***

Find the vertical, horizontal, hole, and oblique asymptotes (if any) of 

***Solution***



***Exercise***

Find the vertical, horizontal, hole, and oblique asymptotes (if any) of 

***Solution***



***Exercise***

Find the vertical, horizontal, hole, and oblique asymptotes (if any) of 

***Solution***



***Exercise***

Find the vertical, horizontal, hole, and oblique asymptotes (if any) of 

***Solution***



***Exercise***

Find the vertical, horizontal, hole, and oblique asymptotes (if any) of 

***Solution***



***Exercise***

Find the vertical, horizontal, hole, and oblique asymptotes (if any) of 

***Solution***











***Exercise***

Find the vertical, horizontal, hole, and oblique asymptotes (if any) of 

***Solution***



***Exercise***

Find the vertical, horizontal, hole, and oblique asymptotes (if any) of 

***Solution***









***Exercise***

Find the vertical, horizontal, hole, and oblique asymptotes (if any) of 

***Solution***



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Find the vertical, horizontal, hole, and oblique asymptotes (if any) of 

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***Exercise***

Find the vertical, horizontal, hole, and oblique asymptotes (if any) of 

***Solution***





***Exercise***

Find the vertical, horizontal, hole, and oblique asymptotes (if any) of 

***Solution***









***Exercise***

Find the limit 

***Solution***





***Exercise***

Find the limit 

***Solution***











***Exercise***

Find the limit 

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***Exercise***

Find the limit 

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Find the limit 

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***Exercise***

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Find the limit 

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***Exercise***

Find the limit 

***Solution***

Since  and inside the square root can’t be negative



***Exercise***

Find the limit 

***Solution***





***Exercise***

Find the limit 

***Solution***





***Exercise***

Find the limit 

***Solution***













***Exercise***

Find the limit 

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***Exercise***

Find the limit 

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***Exercise***

Find the limit 

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***Exercise***

Find the limit 

***Solution***

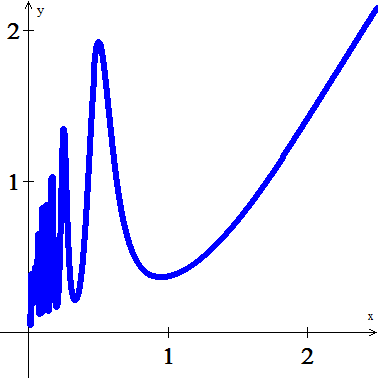
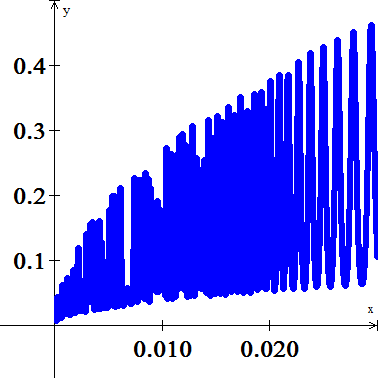










***Exercise***

Find the limit 

***Solution***





***Exercise***

Find the limit 

***Solution***





***Exercise***

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Find the limit 

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***Exercise***

Find the limit 

***Solution***







***Exercise***

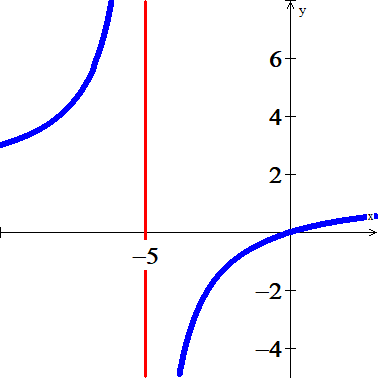
Find the limit 

***Solution***









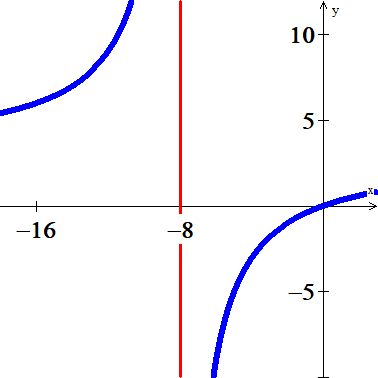
***Exercise***

Find the limit 

***Solution***





***Exercise***

Find the limit 

***Solution***





***Exercise***

Find the limit 

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***Exercise***

Find the limit 

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***Exercise***

Find the limit 

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***Exercise***

Find the limit 

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