Subject: Re: Math Question #1

Posted by archerman on Tue, 11 Nov 2008 11:08:33 GMT

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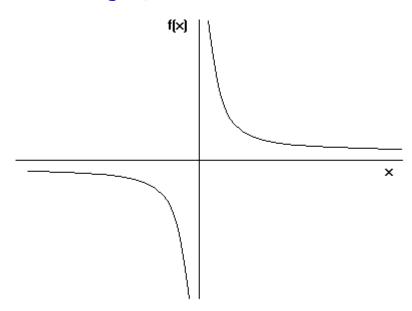
nopol10 wrote on Tue, 11 November 2008 11:38Actually,  $\lim(5/x,x,0)$  (Limit of 5/x as  $x \to 0$ ) is not infinity as limit of 5/x as  $x\to 0$  from the negative side and the limit of 5/x as  $x\to 0$  from the positive side are not equal. Therefore the limit is undefined. It is infinity only when  $x\to 0$  from the positive side and negative infinity when  $x\to 0$  from the negative side.

you are right. the graph of y=5/x is similar to y=1/x which is like:

so limit doesn't exist.

## File Attachments

1) loverx.gif, downloaded 890 times



2) solution.JPG, downloaded 653 times

```
lim sin5x
x->0 2-2cosx
                      cosx=1-2sin^2(x/2)
lim <u>sin5x</u>
x->0 2(1-cosx)
                       1-cosx=2sin^2(x/2)
lim <u>sin5x</u>
                      (eqn. 1)
x->0 4sin^2(x/2)
       5sin5x
                          (when simplified, we have eqn.1)
x->0 <u>sin^2(x/2)</u> x
        (x/2)^2
for 0- limit is at - infinity
                           =>limit doesn't exist.
for 0+ limit is at +infinity
```