1)

**L'Hôpital's Rule**

2)

<https://socratic.org/questions/what-is-the-limit-of-e-x-x-1-x-as-x-approaches-infinity>

**Log Rule**

**raised to the power**

*move the limit inside of the exponential function*

Still in indeterminate form .

**L'Hôpital's Rule**

**Chain rule**

*Common derivative*

3)

<https://www.enotes.com/homework-help/lim-x-gt-1-lnx-tan-pix-2-find-limit-use-544685>

Prepare the limit for L'Hospital's rule, by writing it as a quotient

**Chain rule**

*Common derivative*

4)

5)

6)