

Topics for Chapter 2

1) Limits

a) Right and left hand limits

b) Limits involving infinity

If $\lim_{x \rightarrow \pm\infty} f(x) = L$ then $f(x)$ has a horizontal asymptote at $y = L$

If $\lim_{x \rightarrow a^\pm} f(x) = \pm\infty$ then $f(x)$ has a vertical asymptote at $x = a$

c) Know this limit: $\lim_{x \rightarrow 0} \frac{\sin x}{x} = 1$

2) Continuity

a) $\lim_{x \rightarrow a} f(x) = f(a)$

b) Removable discontinuities; “filling the hole in the graph”

c) Discontinuities that aren't removable: “Jump” discontinuities and vertical asymptotes

One half sheet (8 ½ X 5 ½) of notes is allowed. Only formulas, no examples. It must be handwritten by you. No sharing of note sheets and no photocopies or typewritten sheets are allowed. It must have your name on it and be turned in with the test. Calculators are allowed.

Review Problems due on the day of the test:

Page 91-93 # 5, 8, 9, 14, 15–29, 39, 40