

Math AA HL at KCA - Chapter 13 Notes

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1 Continuity

A function is continuous if it can be drawn entirely over its domain without "lifting the pen".

The points of discontinuity are a set of points in the domain of a function at which the function is discontinuous.

2 The Laws of Limit

If $\lim_{x \rightarrow a} f(x) = l$ and $\lim_{x \rightarrow a} g(x) = m$, then

- Additive: $\lim_{x \rightarrow a} f(x) \pm g(x) = l \pm m$
- Multiplicative: $\lim_{x \rightarrow a} f(x) \cdot g(x) = lm$
- Reciprocal: $\lim_{x \rightarrow a} \left(\frac{f(x)}{g(x)} \right) = \frac{l}{m}$