Math 21A
Kouba
Continuity

Def: Function $y=f(x)$ is **continuous at $x=a$** if

i.) $f(a)$ exists (a finite #)

ii.) $\lim_{x\to a} f(x)$ exists (a finite #)

iii.) $\lim_{x\to a} f(x) = f(a)$

Shortcut 1: Every polynomial is continuous for all values of x.

Shortcut 2: Sums, differences, products, quotients (denominator $\neq 0$), and compositions of continuous functions are continuous.

Well-Known Continuous Functions:

$\sin x$, $\cos x$, e^x, $\ln x$ (for $x>0$), $\sqrt{x}$ (for $x\geq 0$)