$$\lim_{x\to c} b = b$$

$$\lim_{x\to c} x = c$$

$$\lim_{x\to c} x^n = c^n$$

$$\lim_{x\to c} \sqrt[n]{x} = \sqrt[n]{c} \qquad n \text{ is even} \qquad c > 0$$

$$\lim_{x\to\infty}\left[\frac{p(x)}{q(x)} = \frac{a_n x^n + a_{n-1}x^{n-1} + \ldots + a_1 x + a_0}{b_n x^n + b_{n-1}x^{n-1} + \ldots + b_1 x + b_0}\right] = \frac{a_n}{b_n}$$

$$\lim_{x\to c}\left[bf(x)\right] = b\lim_{x\to c} f(x)$$

$$\lim_{x\to c}\left[f(x) \pm g(x)\right] = \lim_{x\to c} f(x) \pm \lim_{x\to c} g(x)$$

$$\lim_{x\to c}\left[f(x)\cdot g(x)\right] = \lim_{x\to c} f(x)\cdot \lim_{x\to c} g(x)$$

$$\lim_{x\to c}\left[\frac{f(x)}{g(x)}\right] = \frac{\lim_{x\to c} f(x)}{\lim_{x\to c} g(x)}$$

$$\lim_{x\to c}\left[f(x)\right]^n = \left[\lim_{x\to c} f(x)\right]^n$$

$$\lim_{x\to c}\sqrt[n]{f(x)} = \sqrt[n]{\lim_{x\to c} f(x)}$$

$$\lim_{x\to\infty}\frac{1}{x^n} = 0 \qquad n > 0$$

$$n \text{ even} \qquad \lim_{x\to\pm\infty} x^n = \infty$$

$$n \text{ odd} \qquad \lim_{x\to\infty} x^n = \infty \qquad \lim_{x\to-\infty} x^n = -\infty$$

$$\lim_{x\to\infty} e^x = \infty \qquad \lim_{x\to-\infty} e^x = 0$$

$$\lim_{x\to\infty} \ln(x) = \infty \qquad \lim_{x\to 0^+} \ln(x) = 0$$