

$$\lim_{x \rightarrow \infty} y = ? \quad y = x^n, n > 0$$

x	$y = \sqrt[3]{x}$	$y = \sqrt{x}$	$y = x^2$	$y = x^3$
10	2.15	3.16	100	10^3
50	3.68	7.07	2500	$1.25(10^5)$
100	4.64	10	10000	10^6
500	7.94	22.36	250000	$1.25(10^8)$
1000	10	31.62	1000000	10^9
5000	17.10	70.71	25000000	$1.25(10^{11})$
10000	21.54	100	100000000	10^{12}

$$\lim_{x \rightarrow \infty} y = ? \quad y = x^{-n}, n > 0$$

x	$y = \frac{1}{\sqrt[3]{x}}$	$y = \frac{1}{\sqrt{x}}$	$y = x^{-2}$	$y = x^{-3}$
10	0.46	0.32	0.01	10^{-3}
50	0.27	0.14	0.0004	$8(10^{-6})$
100	0.22	0.1	0.0001	10^{-6}
500	0.13	0.04	0.000004	$8(10^{-9})$
1000	0.1	0.032	0.000001	10^{-9}
5000	0.058	0.014	0.00000004	$8(10^{-12})$
10000	0.046	0.01	0.00000001	10^{-12}