

As input size doubles ...

Function \ input size	n = 10	2n = 20	ratio = 2
Linear			
n	10	20	2
2n	20	40	2
3n	30	60	2
Polynomial (other than linear)			
n^2	100	400	4 ($=2^2$)
n^3	1000	8000	8 ($=2^3$)
n^4	10000	160000	16 ($=2^4$)
Exponential			
2^n	2^{10}	2^{20}	2^{10}
3^n	3^{10}	3^{20}	3^{10}
4^n	4^{10}	4^{20}	4^{10}