$f(n) = 5n^2 + 6n + 12$

where n is the number of instructions executed, and it depends on the size of the input.

When n=1

% of running time due to $5n^2$ = $\frac{5}{5+6+12}$ * 100 = 21.74%

% of running time due to 6n = $\frac{6}{5+6+12}$ * 100 = 26.09%

% of running time due to 12 = $\frac{12}{5+6+12}$ * 100 = 52.17%

From the above calculation, it is observed that most of the time is taken by 12. But, we have to find the growth rate of f(n), we cannot say that the maximum amount of time is taken by 12. Let's assume the different values of n to find the growth rate of f(n).

n	$5n^2$	6n	12
1	21.74%	26.09%	52.17%
10	87.41%	10.49%	2.09%
100	98.79%	1.19%	0.02%
1000	99.88%	0.12%	0.0002%

As we can observe in the above table that with the increase in the value of n, the running time of $5n^2$ increases while the running time of 6n and 12 also decreases. Therefore, it is observed that for larger values of n, the squared term consumes almost 99% of the time. As the n^2 term is contributing most of the time, so we can eliminate the rest two terms.