11. The number of operations executed by algorithms A and B is $40n^2$ and $2n^3$, respectively. Prove briefly that A is better than B, deciding the constant 'c' and n_0, as defined for Big-O notation. [5 Marks]

$40n^2 \leq 40n^3 = 20 \cdot 2n^3$ for $n \geq 1$

$c = 20 \quad n_0 = 0$ 1

Since the growth rate of B is much higher than A, we can conclude that A is better than B.