Strassen's Algorithm Solution

$$
\begin{aligned}
&\mathrm{T(n)} = 7\mathrm{T}\left(\frac{\mathrm{n}}{2}\right) + n^2 \\
&= 7\left(7\mathrm{T}\left(\frac{n}{2^2}\right) + \left(\frac{n}{2}\right)^2\right) + n^2 \\
&= 7\left(7^m T\left(\frac{n}{2^m}\right) + \sum_{k=1}^{m}\left(\frac{n}{2^k}\right)^2\right) + n^2 \\
&\in \Theta\left(7^{\log_2 n} + n^2\right) \\
&= \Theta\left(\left(2^{\log_2 7}\right)^{\log_2 n} + n^2\right) \\
&= \Theta\left(n^{\log_2 7} + n^2\right) \\
&\approx \Theta\left(\mathrm{n}^{2.8}\right)
\end{aligned}
$$

Note: $\log_2 7$ approximately 2.8.