

Answer on Question#52031, Physics, Quantum Mechanics

We are given $x(t)=5t^2+1$.

The average velocity between time $t=2\text{ s}$ and $t=3\text{ s}$ by definition is $v=\frac{x(3)-x(2)}{3-2}$. The positions at times $t=2\text{ s}$ and $t=3\text{ s}$ are $x(2)=21\text{ m}$ and $x(3)=46\text{ m}$ respectively.

Plugging in these values into formula for average velocity, obtain $v=\frac{46\text{ m}-21\text{ m}}{1\text{ s}}=25\frac{\text{m}}{\text{s}}$.