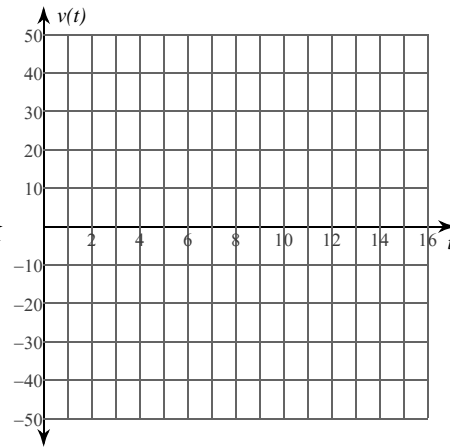
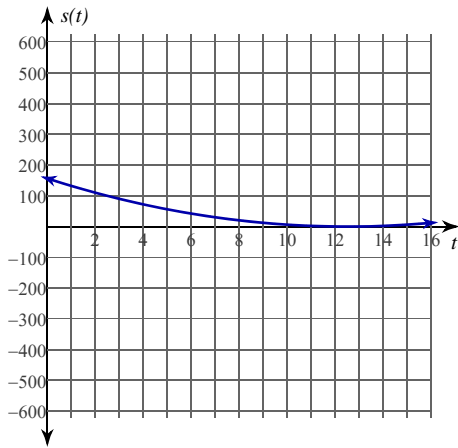


Motion Along a Line

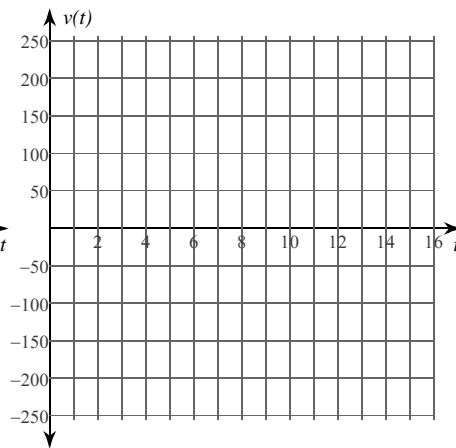
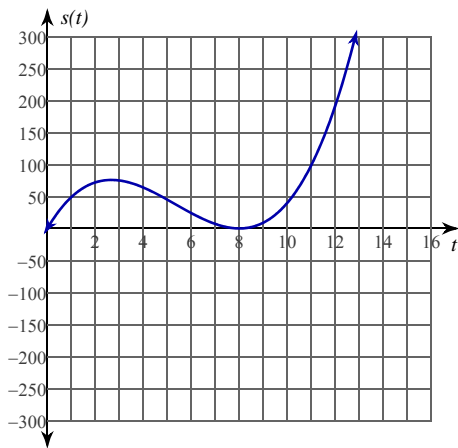
Date _____ Period _____

A particle moves along a horizontal line. Its position function is $s(t)$ for $t \geq 0$. For each problem, find the velocity function $v(t)$. The graph of $s(t)$ is provided. Use the blank graph to sketch $v(t)$.

1) $s(t) = t^2 - 25t + 156$

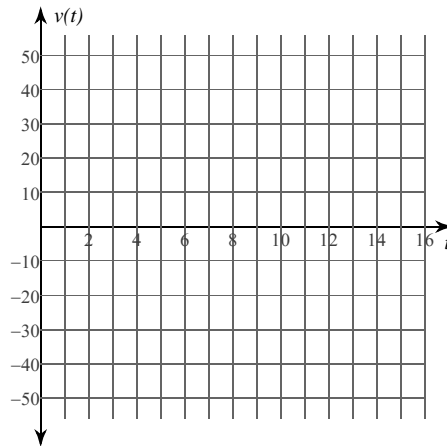
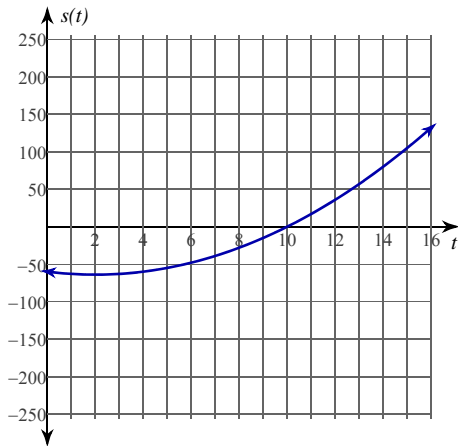


2) $s(t) = t^3 - 16t^2 + 64t$

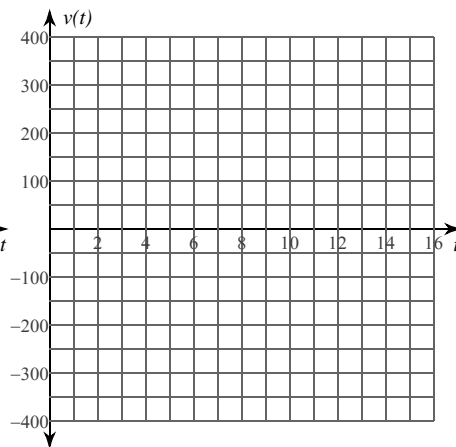
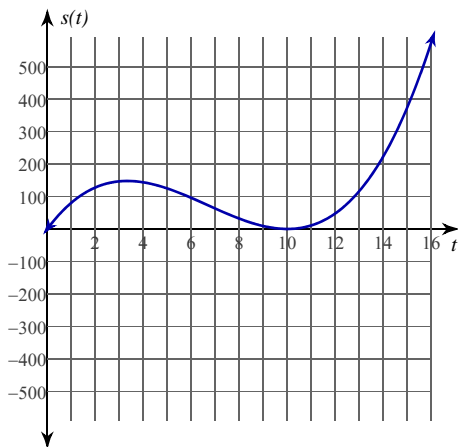


A particle moves along a horizontal line. Its position function is $s(t)$ for $t \geq 0$. For each problem, find the velocity at the given value for t . The graph of $s(t)$ is provided. Use the blank graph to sketch $v(t)$.

3) $s(t) = t^2 - 4t - 60$; at $t = 5$



4) $s(t) = t^3 - 20t^2 + 100t$; at $t = 4$

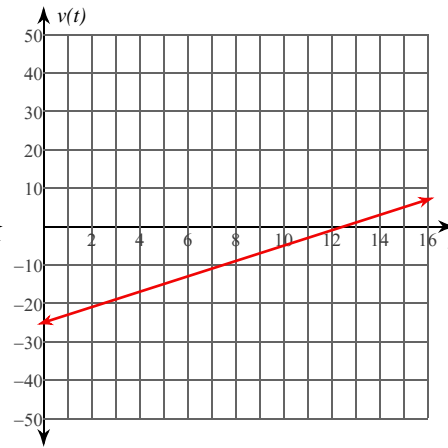
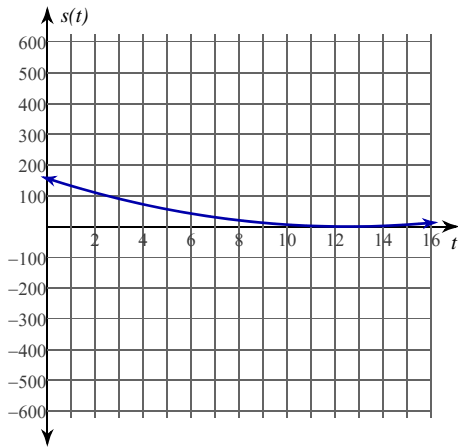


Motion Along a Line

Date _____ Period _____

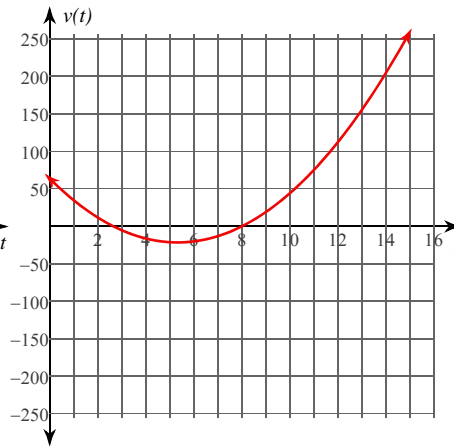
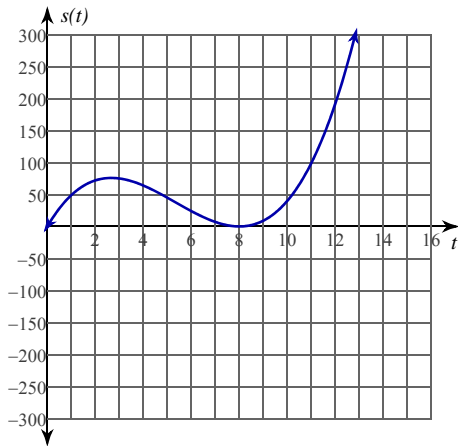
A particle moves along a horizontal line. Its position function is $s(t)$ for $t \geq 0$. For each problem, find the velocity function $v(t)$. The graph of $s(t)$ is provided. Use the blank graph to sketch $v(t)$.

1) $s(t) = t^2 - 25t + 156$



$$v(t) = 2t - 25$$

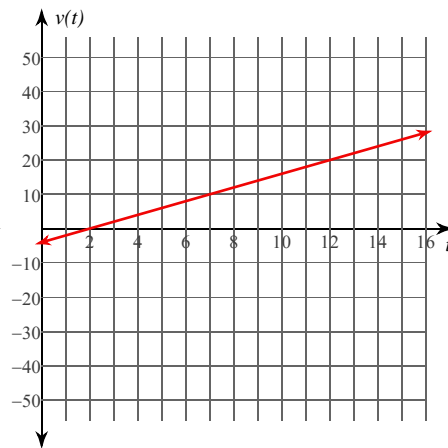
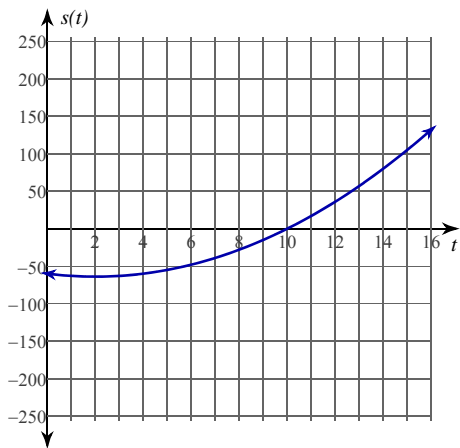
2) $s(t) = t^3 - 16t^2 + 64t$



$$v(t) = 3t^2 - 32t + 64$$

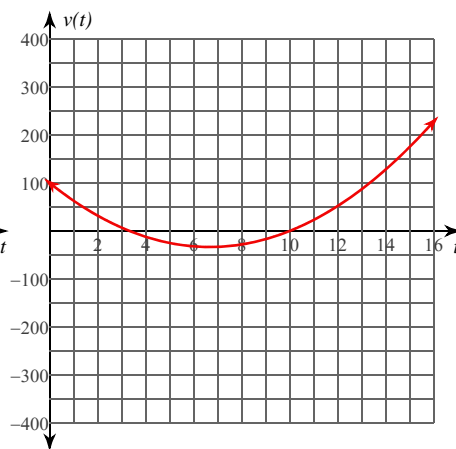
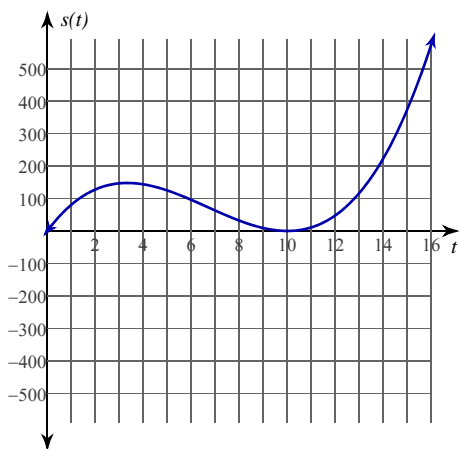
A particle moves along a horizontal line. Its position function is $s(t)$ for $t \geq 0$. For each problem, find the velocity at the given value for t . The graph of $s(t)$ is provided. Use the blank graph to sketch $v(t)$.

3) $s(t) = t^2 - 4t - 60$; at $t = 5$



$v(5) = 6$

4) $s(t) = t^3 - 20t^2 + 100t$; at $t = 4$



$v(4) = -12$