Name_____
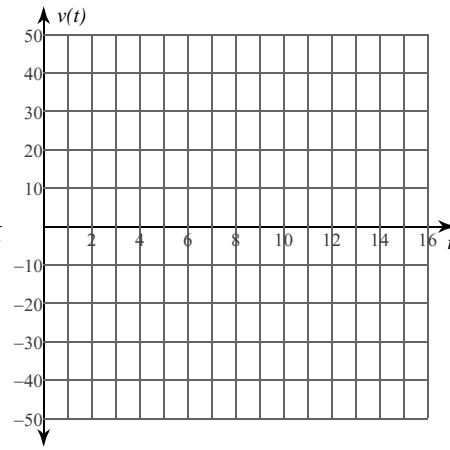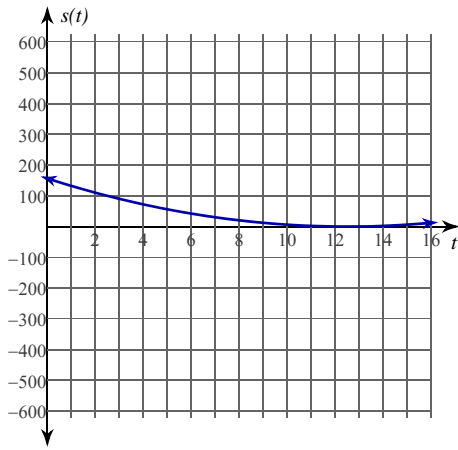
Motion Along a Line
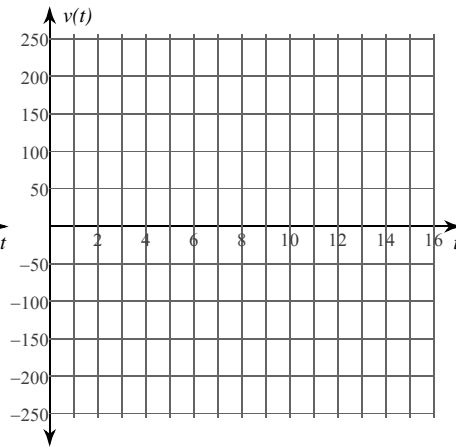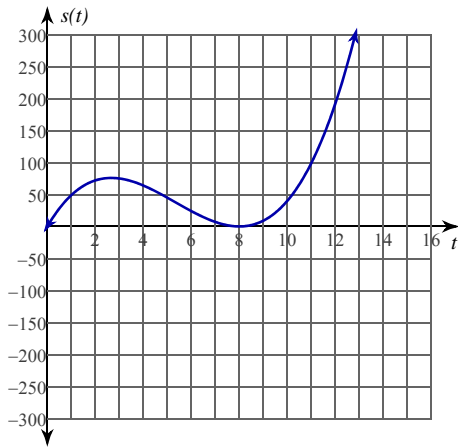
Date_____ Period_____

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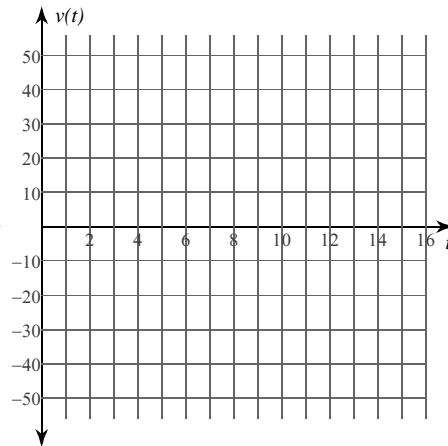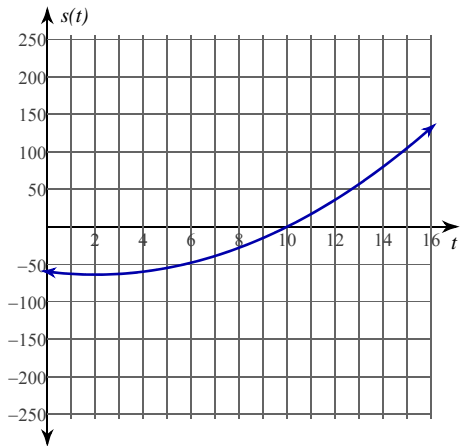
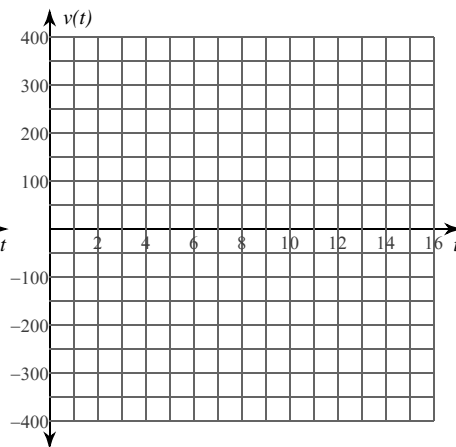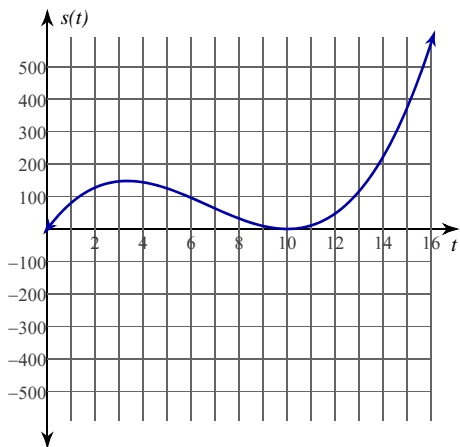1) $s(t) = t^2 - 25t + 156$

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 $t = 5$
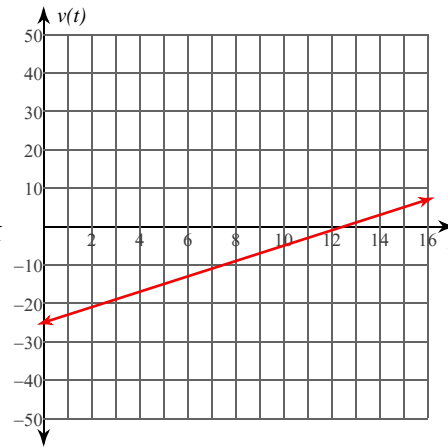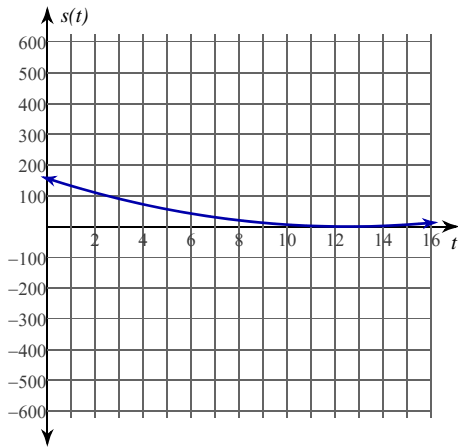

4) $s(t) = t^3 - 20t^2 + 100t$; at $t = 4$
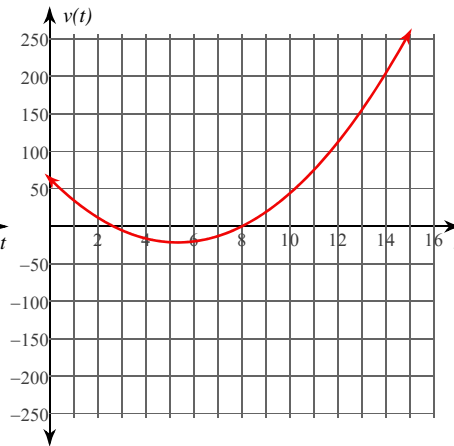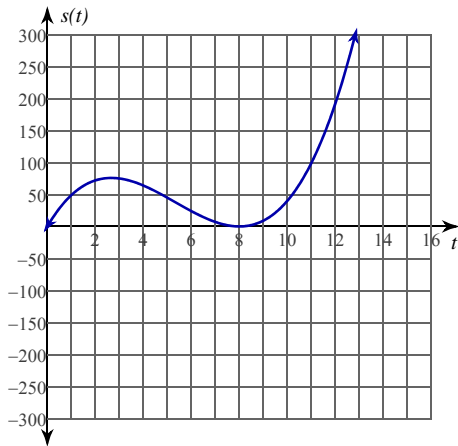
Name_____

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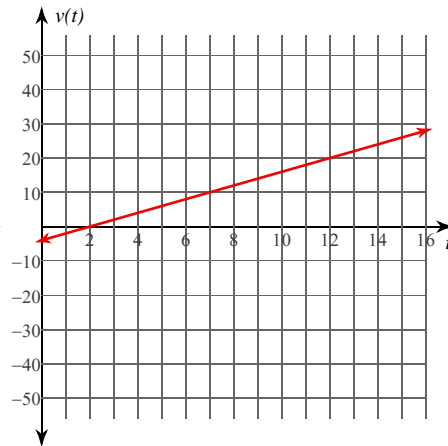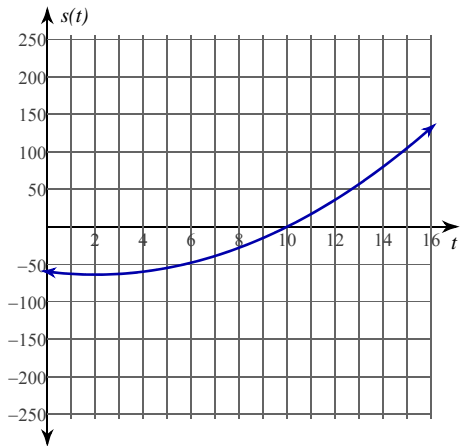
1) $s(t) = t^2 - 25t + 156$

$v(t) = 2t - 25$

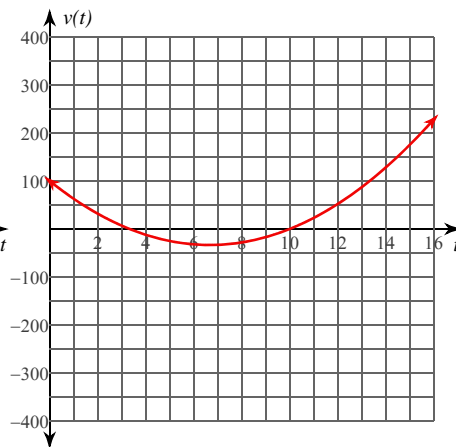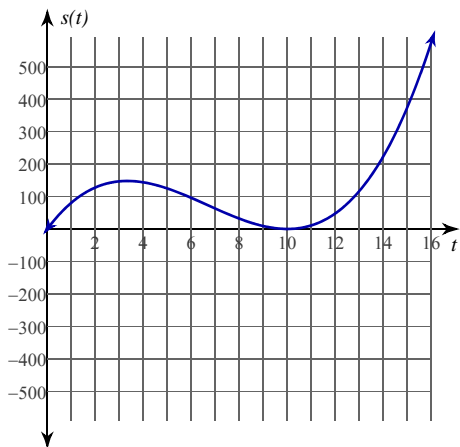2) $s(t) = t^3 - 16t^2 + 64t$

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

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 $t = 4$

$v(4) = -12$