

Your Name: _____

Partner: _____

Analytical

$f(x) = x^2 \cos(x)$

$f'(x) =$

Numerical

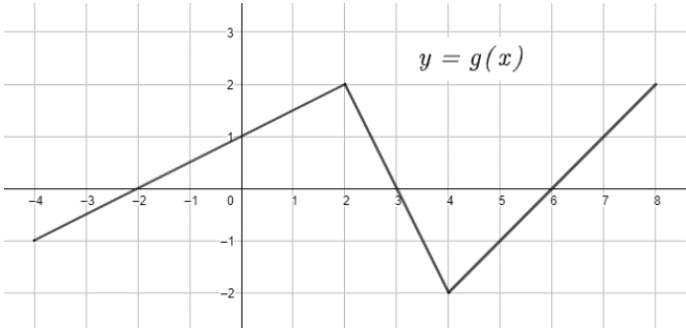
x	-1	1
$k(x)$	-3	2
$k'(x)$	4	-5

$h(x) = \frac{k(x)}{3x}$

$h'(-1) =$

Derivative Rules: Level 1

Graphical



$p(x) = 5x \cdot g(x)$

$p'(3) =$

Conceptual/Verbal

$g(x) = e^x$

$f(x) = 3g(x) - x^2 + 3$

$f'(2) =$

Name: _____
The Basics of Speed, Velocity and Acceleration

Block: _____
AP Calculus AB

Date: _____

Prior knowledge about the Cartesian coordinate plane

On the Cartesian coordinate plane, as we read numbers along the horizontal axis from _____
_____, the numbers are _____, with _____ numbers to the
left, and _____ numbers to the right. Similarly, as we read numbers along the vertical axis
from _____, the numbers are _____, with negative
numbers below the _____ and positive numbers above the _____.

Part I – Speed versus Velocity

Velocity is a function of time. Velocity gives us _____ and
the _____.

By contrast, speed gives us _____, but not the
_____.

The formula for speed is _____ = _____. Thus, by definition, speed is always
_____.

Part II – The direction of movement

Assume a particle is moving along a horizontal line. When the particle is moving to the right, then
_____. When the particle is moving to the left, then _____.

If an object is falling vertically, then _____. If an object is traveling upward, then
_____.

Finally, if _____, then there are two possible interpretations:

- 1) the object is _____ or
- 2) the object is at a point where it is _____.