Name _____

AB Memory Quiz 1

Complete the statement on the left with a statement from the right.

_____1. Average Rate of Change of f on [a, b]

_____2. Instantaneous Rate of Change of f at
a =

_____3. Chain Rule =

_____4. Particle is moving right/up because

_____5. Particle is slowing down (|velocity| is
getting smaller) because

_____6. $f(x)$ has horizontal tangents when

_____7. $f(x)$ has vertical tangents when

_____8. $\frac{d}{dx}[\arctan] =$

_____9. $\frac{d}{dx}[a^x] =$

_____10. Mean Value Theorem means

_____11. $x = c$ is a critical number because

_____12. $f(x)$ is increasing b/c

_____13. $f(x)$ is decreasing b/c

_____14. f has a relative max b/c

_____15. f has a relative min b/c

A. $\frac{dy}{dx} = \frac{dy}{du} \cdot \frac{du}{dx}$ or $\frac{d}{dx}[f(g(x))] = f'(g(x)) \cdot g'(x)$

B. $\frac{dy}{dx} = 0$

C. $f'(a)$

D. $f'(x) = 0$ or $f'(x)$ is undefined

E. $v(t) > 0$ (positive)

F. $f'(c) = 0$ (or und) and $f'(x)$ changes
from - to +.

G. $\frac{1}{1+x^2}$

H. $\frac{f(b) - f(a)}{b - a}$

I. $\frac{dy}{dx}$ is undefined

J. $a^x \ln a$

K. $v(t)$ and $a(t)$ have different signs.

L. $f'(x) > 0$.

M. $f'(c) = \frac{f(b) - f(a)}{b - a}$

N. $f'(x) < 0$

O. $f'(c) = 0$ (or und) and $f'(x)$ changes
from + to -.