Recommended Review

State the Second Fundamental Theorem of Calculus

State the Average Value of a Function formula

State the derivative rules:

Power Rule:

Product Rule:

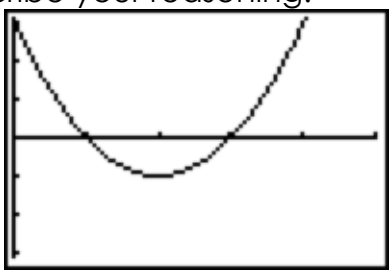
Chain Rule:

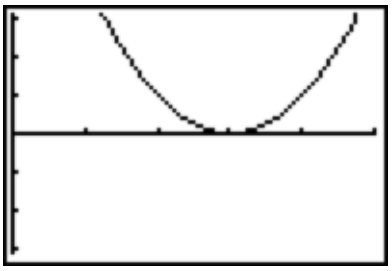
Quotient Rule:

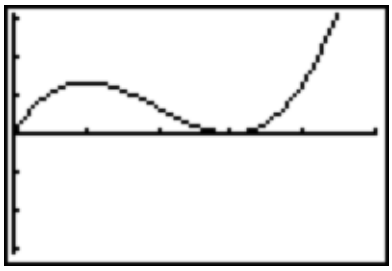
Does differentiability imply integrability? Explain.

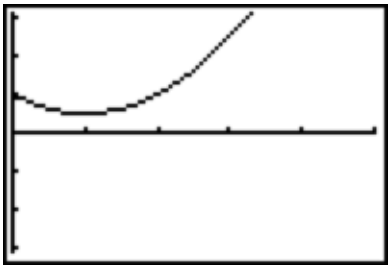
State 3 differences between critical numbers and inflection points.

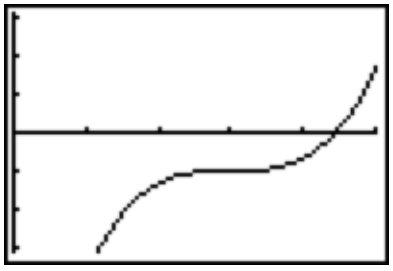
The graphs below represent 3 functions and the derivatives of those functions. Identify the original functions and state which is the derivative of each. Use Complete Sentences to describe your reasoning.

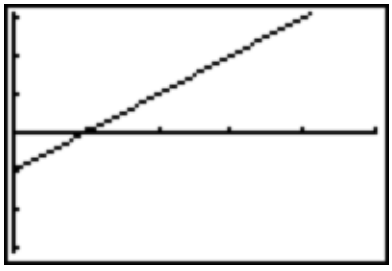
A. 

B. 

C. 

D. 

E. 

F. 

Recommended Review

State the Second Fundamental Theorem of Calculus. When $f''(x)<0$, $f(x)$ is conc. down; $f''(x)>0$, $f(x)$ is conc. up

State the Average Value of a Function formula from a to b

$$\frac{1}{b-a}\int_a^b f(x)\,dx$$

State the derivative rules:

Power Rule: $f(x)=a\cdot x^n$, $f'(x)=an\cdot x^{n-1}$

Product Rule: $f(x)=g(x)\cdot h(x)$, $f'(x)=g'(x)h(x)+g(x)\cdot h'(x)$

Chain Rule: $f(x)=g(h(x))$, $f'(x)=g'(h(x))\cdot h'(x)$

Quotient Rule: $f(x)=\frac{g(x)}{h(x)}$, $f'(x)=\frac{h(x)\cdot g'(x)-g(x)h'(x)}{h(x)^2}$

Does differentiability imply integrability? Explain.

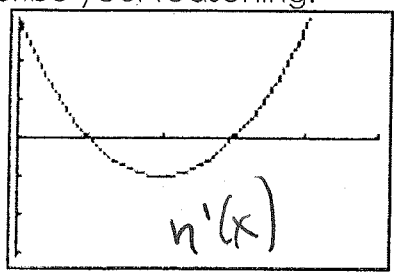
Yes dif → cont → integ.

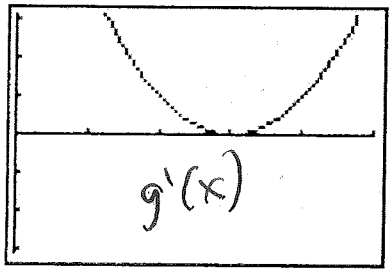
State 3 differences between critical numbers and inflection points.

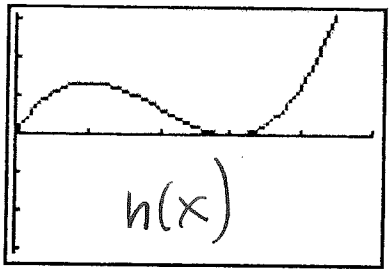
first deriv. → all $f'(x)$ or undef ← criticals = min/max

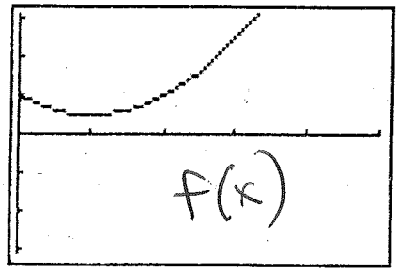
second deriv. → only at inflection = change in concav.

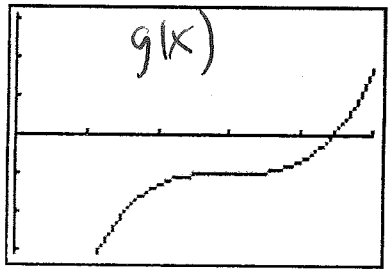
The graphs below represent 3 functions and the derivatives of those functions. Identify the original functions and state which is the derivative of each. Use Complete Sentences to describe your reasoning.

A. 

B. 

C. 

D. 

E. 

F.