

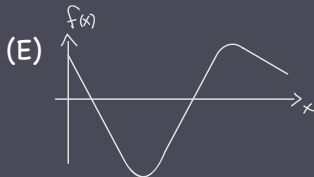
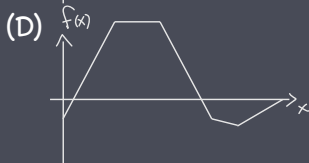
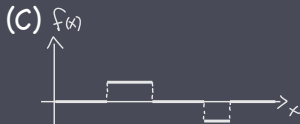
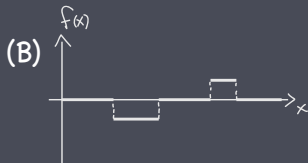
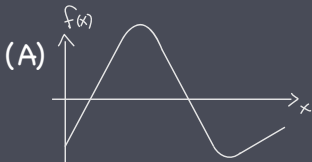
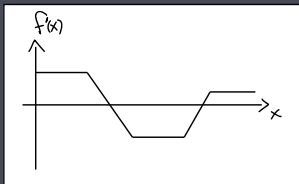
More questions about the  
Derivative  
Math 102 Section 107

Krishanu Sankar

September 20, 2017

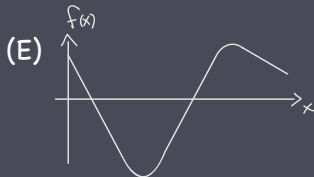
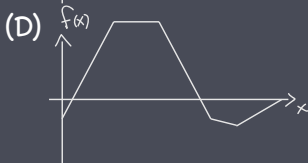
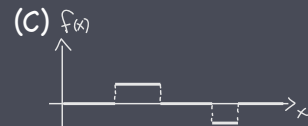
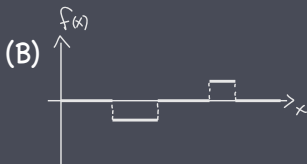
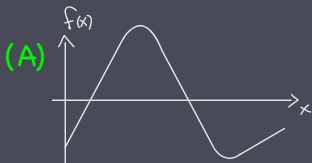
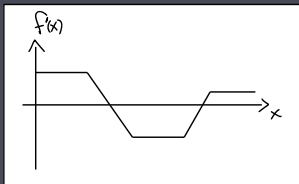
# Geometric aspects of the derivative

Q1. Given  $f'(x)$ , sketch the original function.



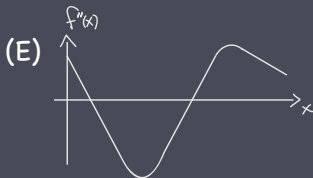
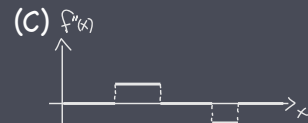
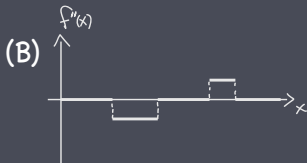
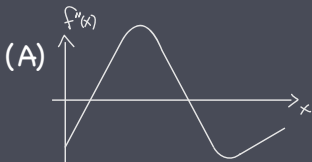
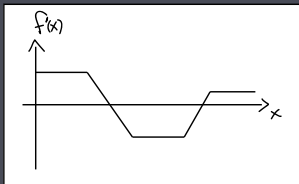
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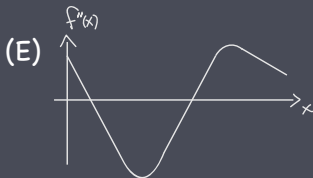
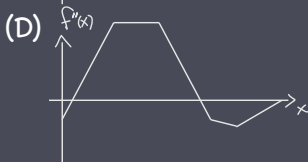
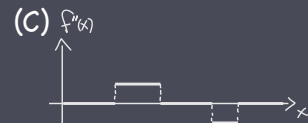
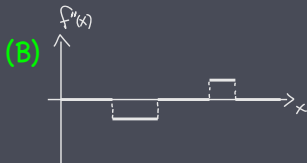
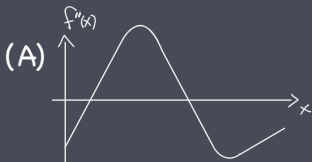
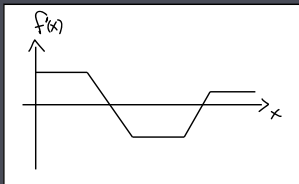
# Geometric aspects of the derivative

Q2. Given  $f'(x)$ , sketch the *second* derivative,  $f''(x)$ .



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$$x(t), v(t), a(t)$$

►  $x(t)$  = position

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**Acceleration** is the second derivative of position.

Q3.

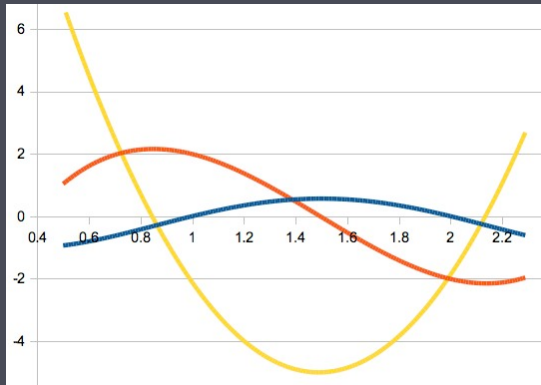
Which is  $x$ ,  $v$ ,  $a$ ?

(A)  $x$ ,  $v$ ,  $a$

(B)  $x$ ,  $v$ ,  $a$

(C)  $x$ ,  $v$ ,  $a$

(D)  $x$ ,  $v$ ,  $a$



Check max/mins  $\rightarrow$  zeros, check inc/dec  $\rightarrow$  +/-.

Q3.

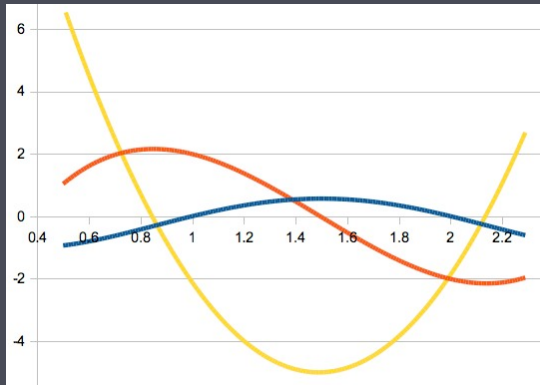
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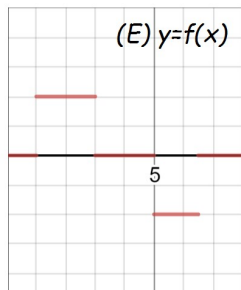
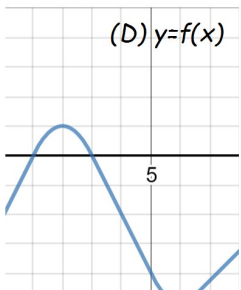
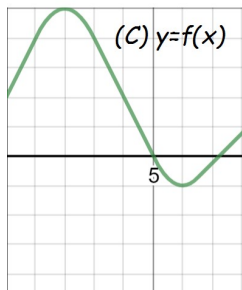
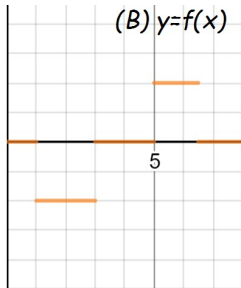
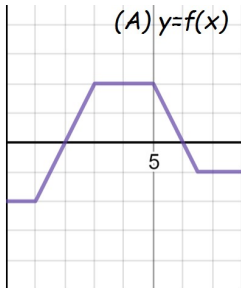
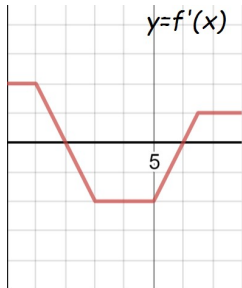
(C)  $x$ ,  $v$ ,  $a$

(D)  $x$ ,  $v$ ,  $a$



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Q4. Given  $f'(x)$ , find  $f(x)$ .



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