Lesson 68

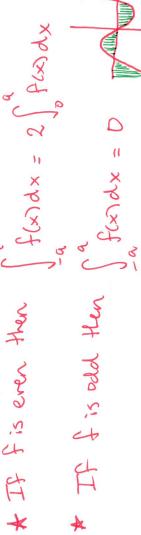
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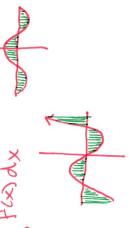
Even and old functions Agenda: 11/18/15 lesson 68

A function fix) is even if fix = f(-x) for all x in the domain of f. [ Symmetric about]

It function fix) is odd if f(-x)=-f(x) for all x in the domain of f. [Symmetriz]

 $\int_{a}^{a} f(x) dx = 2 \int_{b}^{a} f(x) dx$ 





Ex. 68,2 Is fex=x3-x on even, odd or reither fruction?

f(-x)=(-x)=-x3+x=-(x3-x)=-f(x)  $\int_{0}^{2} (x^{3}-x) dx = 0$ 20

Odd A A Poly is even if all exponts of x are even and odd if all exponents of x are adol.

Ex, 68.6 Are the Billowing era, odd or rester fuctions?

$$(a)$$
 f(x)=  $e^{x}$ 

(b) 
$$g(x) = e^{-x^2}$$

(b) 
$$g(-x) = e^{-(-x)^2} = e^{-x^2}$$
  
[Even]

EX. 68.7 Is KW= X2+ COSCA) erry, odd or vertur?

$$K(-x) = (-x)^2 + (-x) = x^2 + (-x) = -K(x)$$

and sin(-x) =-sin(x) becomes its odd, A Recall Costx = cost-x) because its even