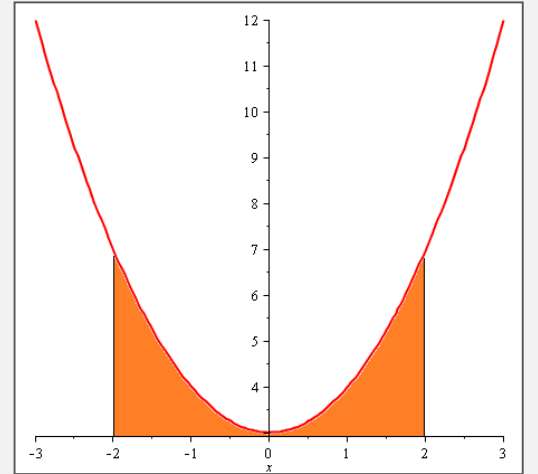
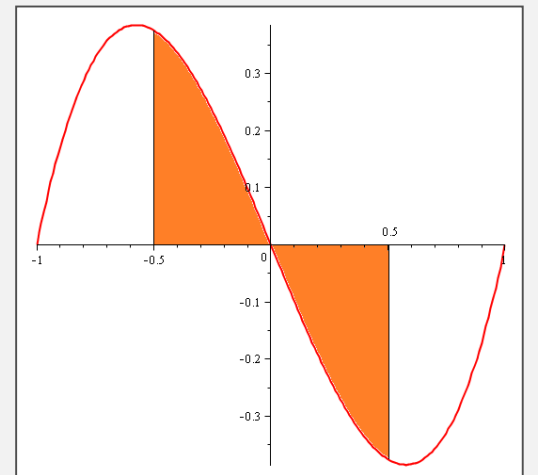


FUNDAMENTALS

1. For f even,
$$\int_{-a}^a f(x) dx = 2 \int_0^a f(x) dx.$$



2. For f odd,
$$\int_{-a}^a f(x) dx = 0.$$



PROBLEMS

Evaluate by using substitution and FTC II:

$$(a) \int_0^1 \sqrt{1+6t} \, dt$$

$$(b) \int_1^2 x(x^2+1)^3 \, dx$$

$$(c) \int_{-1}^1 \frac{\tan x}{1+x^4} \, dx$$

$$(d) \int_{\pi^2/9}^{\pi^2/4} \frac{\sin \sqrt{\theta}}{\sqrt{\theta}} \, d\theta$$