

PROBLEMS (REVISED)

Evaluate the definite integrals. Use the FTC II if it applies.

$$(a) \int_1^4 2\sqrt{x} \, dx$$

$$(b) \int_0^{2\pi} \cos t \, dt$$

$$(c) \int_0^{\pi/6} (1 - \sin \theta) \, d\theta$$

$$(d) \int_2^2 \frac{\sin x}{x} \, dx$$

$$(e) \int_1^4 (1-x)(x-4) \, dx$$

$$(f) \int_{-4}^1 |x| \, dx$$

THINK ABOUT IT...

Under what circumstances would FTC II not apply? Give at least two examples.

$$\int_a^b f(x) dx = F(b) - F(a)$$