pg 240

#27 Area

$x = 12$ $\quad dx = \pm \frac{1}{64}$

$A = x^2$

$\frac{dA}{dx} = 2x$

$dA = 2x\,dx$

$= 2(12)(\pm 1/64)$

$dA = \pm \frac{3}{8}$ or $\pm .375 in^2$

(31)

$A = x^2$

This weekend

Pg 240 27, 30, 31

$\sqrt{50}$ $\sqrt{18}$

$\sqrt[3]{127}$

Read 4.1

*250

* look over your test

4.1

$$\int F'(x)\,dx = F(x) + C$$

$F(x) = x^2$

$f'(x) = 2x^{2-1} = 2x^1$

$\frac{dy}{dx} = 2x \rightarrow dy = 2x\,dx$

$$\int 2x\,dx$$

$$\frac{2x^{1+1}}{2} + C$$

$$\boxed{x^2 + C}$$

$$\int x^n\,dx = \frac{x^{n+1}}{n+1} + C$$

$f'(x)$

$$\int \frac{1}{x^3}\,dx = \int x^{-3}\,dx$$

$$= \frac{x^{-3+1}}{-3+1} + C$$

$$= \frac{x^{-2}}{-2} + C$$

$-\frac{1}{2}x^{-2}$

x^{-3}

$$F(x) = \frac{-1}{2x^2} + C$$

$$\int -\sin x\,dx = \cos x + C$$

$$\int \sin x\,dx = -\cos x + C$$

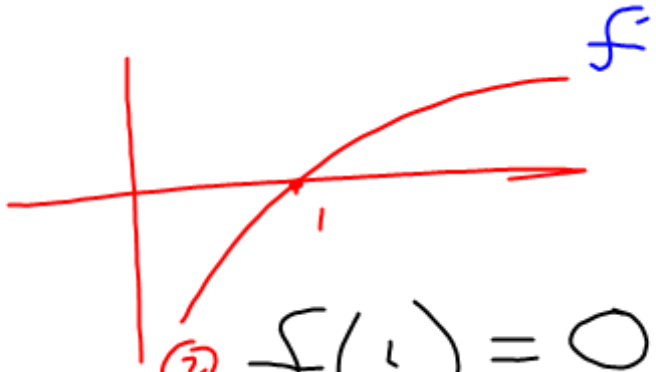
$$\int 3x\,dx = 3\int x\,dx = \frac{3x^2}{2} + C$$

$1x^0$

$$\int 1\,dx = x + C$$

$$\int 0\,dx = C$$

(1)



(2) $f(1) = 0$

(3) $f'(1) > 0$

(1) $f''(1) < 0$

(D)

$f''(1) < f(1) < f'(1)$

(2) $f(x) = x^4 + x^2 - 2$

$f'(x) = 4x^3 + 2x$

$= 2x(2x^2 + 1)$

$2x = 0$

$x = 0$

$2x^2 + 1 = 0$

$2x^2 = -1$

$x = \pm \frac{i}{\sqrt{2}}$

$(0, \infty)$

C