$3(4x+5)^{10}$

$u = 4x+5$ $\qquad y = 3u^{10}$

$\frac{du}{dx} = 4$ $\qquad \frac{dy}{du} = 30u^9$

$120(4x+5)^9$

$(x+2)^2$ $(x+2)(x+2)$

$y = \cos(x^2+3)$ $\cos x(x^2+3)$

$u = x^2+3$ $y = \cos u$

$\frac{du}{dx} = 2x$ $\frac{dy}{du} = -\sin u$

$-2x \sin(x^2+3)$

# 2.4B Trig

Ex. $y = \cos^3 x$ $y = (\cos x)^3$

$u = \cos x$ $y = u^3$

$\frac{du}{dx} = -\sin x$ $\frac{dy}{du} = 3u^2$

$-3\sin x \cos^2 x$

Ex. $y = \sin^3(4x) = (\sin(4x))^3$

$u = 4x \quad y = \sin u$

$\frac{du}{dx} = 4 \quad \frac{dy}{du} = \cos u$

$4\cos 4x$

$u = \sin(4x) \quad y = u^3$

$\frac{du}{dx} = 4\cos(4x) \quad \frac{dy}{du} = 3u^2$

$12\cos(4x)\sin^2(4x)$

$(2x+5)^8$

$8(2x+5)^7 \cdot 2$

P. 137
41-45, 47, 66,
72, 73, 102