A. Compute $\int (x^2+5)^3\, 2x\, dx$.

Solution:

(1). *let* $u =$ _____

$du = 2x\,dx$

$\int (x^2+5)^3 = \int u^3\, du$

$= \frac{u^4}{4} + C$

A.	$6x^2 dx$
B.	x^2+5
C.	$\frac{(x^2+5)^4}{4}+C$
D.	$\int (u)^{\frac{1}{2}}\, du$
E.	$\frac{2}{3}(2x^3+5)^{\frac{3}{2}}+C$
F.	$\int (u)^{\frac{3}{2}}\, du$

(2). $\int (x^2+5)^3 =$ _____

B. Compute $\int 6x^2\sqrt{2x^3+5}\, dx$

let $u = 2x^3+5$

(3). $du =$_____

$\int \sqrt{2x^3+5}\; 6x^2 dx = \int \sqrt{u}\, du$

(4). =_____

$= \frac{u^{\frac{3}{2}}}{\frac{3}{2}} + C$

$= \frac{2}{3} u^{\frac{3}{2}} + C$

$\int 6x^2\sqrt{2x^3+5}\; dx =$ (5)._____