Shawka school C2, C3

Grade 12

Lesson 5.6
INTEGRATION BY SUBSTITUTION

Choose the most suitable **u** in the following integration to use substitution:

$$\int (x^3+5)^2(x^2)dx$$

$a)\ (x^3+5)^2$ $\quad b)\ x^3+5$ $\quad c)\ x^2$

$$\int 2xe^{x^2}dx.$$

$a)\ 2x$ $\quad b)\ e^{x^2}$ $\quad c)\ x^2$

$$\int x\cos x^2\,dx.$$

$a)\ x$ $\quad b)\ cosx^2$ $\quad c)x^2$

$$\int \frac{\sin\sqrt{x}}{\sqrt{x}}\,dx.$$

$a)\ \sqrt{x}$ $\quad b)\ sin\sqrt{x}$ $\quad c)\ \frac{sin\sqrt{x}}{\sqrt{x}}$

$$\int \frac{(\tan^{-1}x)^2}{1+x^2}\,dx.$$

$a)\ tan^{-1}x$ $\quad b)\ sin^{-1}x$ $\quad c)x$

LIVEWORKSHEETS