+	x^3	$\cos 3x$
−	$3x^2$	$\frac{1}{3}\sin$
+	$6x$	$\frac{1}{9}\cos$
−	6	$\frac{1}{27}\sin$
+	0	$\frac{1}{81}\cos$

6) $\int x^3 \cos 3x\, dx$

6) C ✓

A) $\frac{1}{3}x^3 \sin 3x - \frac{1}{3}x^2 \cos 3x + \frac{2}{9}x \sin 3x + \frac{2}{27}\cos 3x + C$

B) $\frac{1}{3}x^3 \sin 3x + \frac{1}{3}x^2 \cos 3x - 2x \sin 3x - 2 \cos 3x + C$

C) $\frac{1}{3}x^3 \sin 3x + \frac{1}{3}x^2 \cos 3x - \frac{2}{9}x \sin 3x - \frac{2}{27}\cos 3x + C$

D) $\frac{1}{3}x^3 \cos 3x + \frac{1}{3}x^2 \sin 3x - \frac{2}{9}x \cos 3x - \frac{2}{27}\sin 3x + C$

7) $\int_0^4 x^4 \ln 9x\, dx$

7) D ✓

A) 774.86 B) -201.22 C) 699.77 D) 692.94

8) $\int (x^2 - 3x)\, e^x\, dx$ $\int x(x-3)e^x$

A 8) D X

A) $e^x[x^2 - 5x + 5] + C$

B) $e^x[x^2 - 5x - 5] + C$

C) $e^x[x^2 - 3x + 3] + C$

D) $\frac{1}{3}x^3e^x - \frac{3}{2}x^2e^x + C$

$-\int \frac{1}{x}\left(\frac{x^5}{5}\right)^4$

$u = \ln(9x)$ $dv = x^4$

$du = \frac{1}{x}$ $v = \frac{x^5}{5}$

$\frac{x^5}{5}\ln(9x) - \frac{x^5}{25} + C$

$\int x^2e^x - 3xe^x\, dx$

$\frac{1}{3}x^3e^x - \frac{3}{2}x^2e^x + C$

$\left[\frac{4^5}{5}\ln(9\times4) - \frac{4^5}{25}\right] - \left[\frac{0^5}{5}\ln(9\times0) - \frac{0^5}{25}\right] = 692.94$