

CALCULUS II
QUIZ 2 A 3RD PARTIAL

100
excellent!!
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+3.5

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question. (12.5 pts each one)

Evaluate the integral.

1) $\int -9x \cos 5x \, dx$

$-9x \cos 5x$
 $+ 9 \cdot \frac{1}{5} \sin 5x = \frac{9}{5} \sin 5x$

A) $-\frac{9}{25} \cos 5x - \frac{9}{5} x \sin 5x + C$ ✓
B) $-\frac{9}{25} \cos 5x - \frac{9}{5} x \sin 9x + C$ ✗
C) $-\frac{9}{25} \cos 5x - \frac{9}{5} \sin 5x + C$ ✗
D) $-\frac{9}{5} \cos 5x - 9x \sin 5x + C$ ✗

1) A ✓

2) $\int 23x \sin x \, dx$

$23x \sin x$
 $-23 \cos x$

A) $23 \sin x - 23 \cos x + C$ ✗
B) $23 \sin x + 23x \cos x + C$ ✗
C) $23 \sin x - 23x \cos x + C$ ✓
D) $23 \sin x - x \cos x + C$ ✗

2) C ✓

3) $\int e^{5x} \cos 4x \, dx$

$e^{5x} \cos 4x$
 $-4 \sin 4x$
 $+ \frac{1}{5} e^{5x} \sin 4x$

A) $\frac{e^{5x}}{2} [\sin 4x + \cos 4x] + C$ ✗
B) $\frac{1}{41} [4 e^{5x} \sin 4x + 5 \cos 4x] + C$ ✗
C) $\frac{e^{5x}}{41} [4 \sin 4x + 5 \cos 4x] + C$ ✓
D) $\frac{e^{5x}}{41} [4 \sin 4x - 5 \cos 4x] + C$ ✗

3) D

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

$x^3 \cos 3x$
 $-3x^2 \sin 3x$
 $+ 6x \cos 3x$
 $- 6 \sin 3x$

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

4) C ✓

5) $\int x^3 \ln 8x \, dx$

$x^3 \ln 8x$
 $- \frac{3}{4} x^3$

A) $\frac{1}{4} x^4 \ln 8x - \frac{1}{16} x^4 + C$ ✓
B) $\ln 8x - \frac{1}{4} x^4 + C$ ✗
C) $\frac{1}{4} x^4 \ln 8x + \frac{1}{16} x^4 + C$ ✗
D) $\frac{1}{4} x^4 \ln 8x - \frac{1}{20} x^5 + C$ ✗

5) A ✓