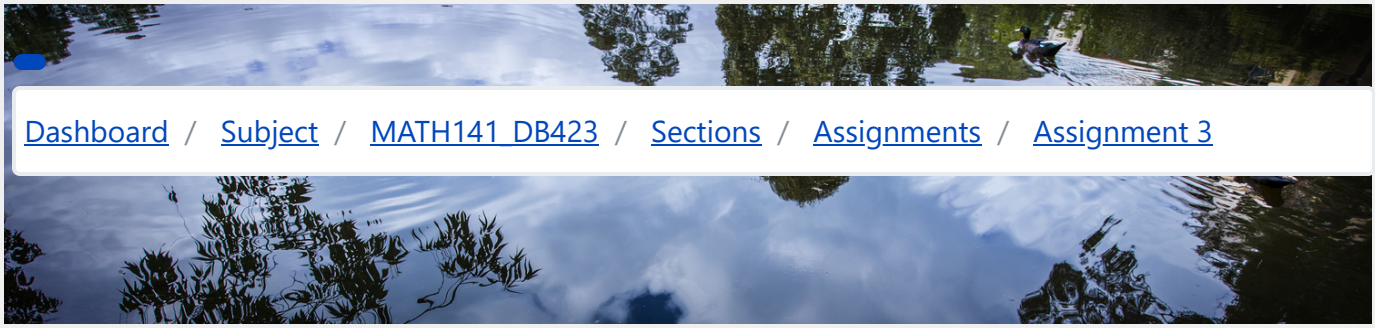

Started on	
State	Finished
Completed on	
Time taken	
Marks	
Grade	

Question **1**

Correct

Mark 1.00 out of 1.00

Evaluate the integral.

$$\int e^t \cot(e^t - 6)\,dt$$

Select one:

- A. $\ln|\cos(e^t - 6)| + C$
- B. $\ln|\sin(e^t - 6)| + C$ ✔
- C. $e^t \ln|\sin(t - 6)| + C$
- D. $\ln|\sin(t - 6)| + C$

The correct answer is: $\ln|\sin(e^t - 6)| + C$

Question **2**

Correct

Mark 1.00 out of 1.00

Evaluate the integral.

$$\int x^2 \sqrt{x^3+9}\, dx$$

Select one:

- A. $2(x^3+9)^{3/2} + C$
- B. $\frac{2}{3}(x^3+9)^{3/2} + C$
- C. $-\frac{2}{3}(x^3+9)^{-1/2} + C$
- D. $\frac{2}{9}(x^3+9)^{3/2} + C$ ✔

The correct answer is: $\frac{2}{9}(x^3+9)^{3/2} + C$

Question **3**

Correct

Mark 1.00 out of 1.00

Evaluate the integral.

$$\int 6\sec^4 x\, dx$$

Select one:

- A. $-2\tan^3 x + C$
- B. $6\tan x + 2\tan^3 x + C$ ✔
- C. $2\tan^3 x + C$
- D. $6(\sec x + \tan x)^5 + C$

The correct answer is: $6\tan x + 2\tan^3 x + C$

Question **4**

Correct

Mark 1.00 out of 1.00

Evaluate the integral.

$$\int x^4 e^{-x^5}\, dx$$

Select one:

- A. $-\frac{1}{5}e^{-x^5} + C$ ✔
- B. $e^{-x^5} + C$
- C. $-\frac{1}{5}e^{-x^6} + C$
- D. $-5e^{-x^6} + C$

The correct answer is: $-\frac{1}{5}e^{-x^5} + C$

Question **5**

Correct

Mark 1.00 out of 1.00

Evaluate the integral.

$$\int_0^{\pi/12} \frac{\sec^2 3x}{5 + \tan 3x}\, dx$$

Select one:

- A. $e^{6/5}$
- B. $\frac{1}{3} \ln \left| \frac{1}{5} \right|$
- C. $\frac{1}{3} \ln \left| \frac{6}{5} \right|$ ✔
- D. $\ln \left| \frac{6}{5} \right|$

The correct answer is: $\frac{1}{3} \ln \left| \frac{6}{5} \right|$

Question **6**

Correct

Mark 1.00 out of 1.00

Evaluate the integral.

$\int 6\cos^3 4x\,dx$

Select one:

- A. $\frac{3}{2}\sin 4x - \frac{1}{2}\cos^3 4x + C$
- B. $\frac{3}{2}\sin 4x + \frac{1}{2}\sin^3 4x + C$
- C. $\frac{3}{2}\sin 4x - \frac{1}{2}\sin^3 4x + C$ ✔
- D. $6\sin 4x - 2\sin^3 4x + C$

The correct answer is: $\frac{3}{2}\sin 4x - \frac{1}{2}\sin^3 4x + C$

Question **7**

Correct

Mark 1.00 out of 1.00

Evaluate the integral.

$$\int \frac{6e^{(6 \sin 3x)}}{\sec 3x} dx$$

Select one:

- A. $6 \ln(\sec 3x) + C$
- B. $\frac{1}{3} \ln(\sec 3x) + C$
- C. $e^{(6 \sin 3x)} + C$
- D. $\frac{1}{3} e^{(6 \sin 3x)} + C$ ✔

The correct answer is: $\frac{1}{3} e^{(6 \sin 3x)} + C$

Question **8**

Correct

Mark 1.00 out of 1.00

Evaluate the integral.

$$\int \frac{1}{t^2} \sin\left(\frac{4}{t} + 3\right) dt$$

Select one:

- A. $\frac{1}{4} \cos\left(\frac{4}{t} + 3\right) + C$ ✔
- B. $4 \cos\left(\frac{4}{t} + 3\right) + C$
- C. $-\frac{1}{4} \cos\left(\frac{4}{t} + 3\right) + C$
- D. $-\cos\left(\frac{4}{t} + 3\right) + C$

The correct answer is: $\frac{1}{4} \cos\left(\frac{4}{t} + 3\right) + C$

Question **9**

Correct

Mark 1.00 out of 1.00

Evaluate the integral.

$$\int \frac{x\,dx}{(7x^2+3)^5}$$

Select one:

A. $-\frac{7}{3}(7x^2+3)^{-4}+C$

B. $-\frac{1}{56}(7x^2+3)^{-4}+C$ ✔

C. $-\frac{7}{3}(7x^2+3)^{-6}+C$

D. $-\frac{1}{14}(7x^2+3)^{-6}+C$

The correct answer is: $-\frac{1}{56}(7x^2+3)^{-4}+C$

Question **10**

Correct

Mark 1.00 out of 1.00

Evaluate the integral.

$$\int_0^{\pi/2} \cos^2 8x \sin^3 8x \, dx$$

Select one:

- A. $\frac{1}{120}$
- B. $\frac{1}{60}$
- C. $\frac{1}{15}$
- D. 0 ✔

The correct answer is: 0

Question **11**

Correct

Mark 1.00 out of 1.00

Evaluate the integral.

$$\int_1^2 \frac{x^2+1}{x^3+3x}\,dx$$

Select one:

- A. $\frac{1}{3}\ln\left|\frac{1}{2}\right|$
- B. $\frac{1}{2}\ln|2|$
- C. $\frac{1}{3}\ln\left|\frac{7}{2}\right|$ ✔
- D. $\frac{1}{3}\ln\left|\frac{3}{10}\right|$

The correct answer is: $\frac{1}{3}\ln\left|\frac{7}{2}\right|$

Question **12**

Correct

Mark 1.00 out of 1.00

Evaluate the integral.

$$\int \frac{dx}{x \ln x^4}$$

Select one:

- A. $\ln\left(\ln x^4\right) + C$
- B. $\frac{1}{4}\ln x^4 + C$
- C. $\ln x^4 + C$
- D. $\frac{1}{4}\ln\left(\ln x^4\right) + C$ ✔

The correct answer is: $\frac{1}{4}\ln\left(\ln x^4\right) + C$