

Math102 Term182
Sec2 Quiz 2

Name	ID	Sr
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Instruction: CIRCLE one answer and SHOW all your work to get full mark

Q1) A particle moves along a line so that its velocity at time t is $v(t) = 3t^2 - 12$.(measured in meters per seconds). then, the distance of the particle during the time interval $[0,3]$ is

a) $30 m$

b) $7m$

c) $16m$

d) $9m$

e) $23 m$

Q2) $\int_0^{\pi/4} \frac{\sqrt{2+\tan x}}{\cos^2 x} dx =$

a) $\frac{1}{12} \pi\sqrt{\pi}$

b) $\pi\sqrt{\pi}$

c) $\frac{1}{3}(3\sqrt{3} - 1)$

d) $\frac{2}{3}(3\sqrt{3} - 2\sqrt{2})$

e) $\pi^2 + 1$

Q3) $\int (\sec^2 x) \tan(\tan x) dx =$

a) $\ln|\sec(\tan x)| + c$

b) $\ln|\tan(\sec x)| + c$

c) $\ln|\tan(\tan x)| + c$

d) $-\sec(\tan x) + c$

e) $\ln(\sec^2 x) + c$

Q4) $\int_1^e \frac{1}{x+x\ln x} dx =$

a) $\ln(1 + e)$

b) $\frac{e}{2}$

c) $e + 2$

d) $\ln 2$

e) e

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Sec 5 Quiz 2

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Q1) A particle moves along a line so that its velocity at time t is $v(t) = \cos t$.(measured in meters per seconds). then, the distance of the particle during the time interval $[0, \frac{3\pi}{2}]$ is

a) $3 m$

b) $2 m$

c) $1 m$

d) $\frac{3}{2}m$

e) $4 m$

Q2) $\int_0^{\ln 3} \frac{e^{2x}}{e^{4x} + 1} dx =$

a) $\frac{\pi}{12}$

b) $\frac{\pi}{6}$

c) $\frac{\pi}{24}$

d) $\frac{1}{2} \tan^{-1} \left(\frac{\ln 3}{4} \right)$

e) $\tan^{-1}(\ln 3)$

Q3) $\int (\sec x \tan x) \cot(\sec x) dx =$

a) $\sin(\sec x) + c$

b) $\ln|\sec(\sin x)| + c$

c) $\ln|\sin x| + c$

d) $\ln|\sin(\sec x)| + c$

e) $-\sec(\tan x) + c$

f) $\ln(\sec^2 x) + c$

Q4) $\int \frac{\cos x}{\sin x \ln(\sin x)} dx =$

a) $-\ln|\ln(\sin x)| + c$

b) $\ln(\sin x) + c$

c) $\ln(\ln(\cos x)) + c$

d) $\frac{1}{\ln(\sin x)} + c$

e) $\ln|\ln(\sin x)| + c$

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Sec 19 Quiz 2

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Instruction: CIRCLE one answer and SHOW all your work to get full mark

Q1) A particle moves along a line so that its velocity at time t is $v(t) = 2t - 2t^3$.(measured in meters per seconds). then, the distance of the particle during the time interval $[0,2]$ is

a) $4 m$

b) $5 m$

c) $1 m$

d) $9 m$

e) $11 m$

Q2) $\int_0^1 \frac{x^4}{\sqrt{3+2x^5}} dx =$

a) $\frac{1}{5}$

b) $\frac{1}{10}$

c) $\frac{1}{5}(\sqrt{5} - \sqrt{3})$

d) $\frac{2}{5}(\sqrt{5} - \sqrt{3})$

e) $\frac{4}{5}$

$$\text{Q3) } \int (\sec^2 x) \cot(\tan x) dx =$$

a) $\ln|\tan(\sin x)| + c$

b) $\ln|\sin(\tan x)| + c$

c) $\ln|\cot(\cot x)| + c$

d) $-\csc(\tan x) + c$

e) $\ln(\sec^2 x) + c$

$$\text{Q4) } \int_1^2 x \left(e^{x^2} - \frac{1}{2x} \right) dx =$$

a) $\frac{1}{2}(e^4 - e - 1)$

b) $\frac{1}{2}(e^4 + e + 1)$

c) $\frac{1}{2}(e^2 - e - 1)$

d) $\frac{1}{2}(e^2 - e)$

e) $e + 1$

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Sec 24 Quiz 2

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Instruction: CIRCLE one answer and SHOW all your work to get full mark

Q1) A particle moves along a line so that its velocity at time t is $v(t) = \sin t$.(measured in meters per seconds). then, the distance of the particle during the time interval $[0, \frac{3\pi}{2}]$ is

a) $3 m$

b) $2 m$

c) $1 m$

d) $\frac{3}{2}m$

e) $4 m$

Q2) $\int_{3/\pi}^{12/\pi} \frac{6\sin(3/x)}{x^2} dx =$

a) $2 \cos\left(\frac{12}{\pi}\right) - 2 \cos\left(\frac{3}{\pi}\right)$

b) $\cos\left(\frac{12}{\pi}\right) - \cos\left(\frac{3}{\pi}\right)$

c) $\frac{1}{5}(\sqrt{5} - \sqrt{3})$

d) $\sqrt{2} + 2$

e) $\frac{1}{5}(\sqrt{3} + 1)$

Q3) $\int (\sec x \tan x) \tan(\sec x) dx =$

a) $\ln|\sec(\sec x)| + c$

b) $\ln|\tan(\sec x)| + c$

c) $\ln|\tan(\tan x)| + c$

d) $-\sec(\tan x) + c$

e) $\ln(\sec^2 x) + c$

Q4) $\int_0^{1/2} \frac{1+x}{\sqrt{1-x^2}} dx =$

a) $\frac{\pi}{3} + \frac{\sqrt{3}}{2}$

b) $\frac{\pi}{3} - \frac{\sqrt{3}}{2} + 1$

c) $\frac{\pi}{6} - \frac{\sqrt{3}}{2} + 1$

d) $\frac{\pi}{6} - \frac{\sqrt{3}}{2}$

e) $\frac{\pi}{6} - \frac{\sqrt{3}}{2} - 1$