

KFUPM--Term 182

Math 102

Quiz # 1(a)

Time: 25 minutes Date: 30-1-2019

Name	ID #	Sr #	Sec. 42	Marks(out of 14):-
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Q1. Using three rectangles, taking the sample points to be midpoints, find the area under the graph of $f(x) = \frac{x+1}{x}$ from $x = 1$ to $x = 7$.

Q2. Find the value of $\lim_{n \rightarrow \infty} \sum_{i=1}^n \frac{\pi}{8n} \sec^2\left(\frac{i\pi}{4n}\right)$.

Q3. A particle moves along a line so that its velocity at time t is $v(t) = t^2 - 4t$ m/s . Find the displacement and the distance travelled during the time period $0 \leq t \leq 4$.

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Quiz # 1(b)

Time: 25 minutes

Date: 30-1-2019

Name	ID #	Sr #	Sec. 42	Marks(out of 14):-
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Q 1. Using four rectangles, taking the sample points to be left endpoints, estimate the area under the graph of $f(x) = \sin^2 x$ from $x = 0$ to $x = \pi$.

Q2. Find the value of $\lim_{n \rightarrow \infty} \sum_{i=1}^n \frac{10}{n} \sqrt{\frac{10n+4i}{2n}}$.

Q3. Find $\frac{d}{dx} \left(\int_{e^{-x}}^{e^x} \ln t \, dt \right)$.

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Quiz # 1(c)

Time: 25 minutes

Date: 30-1-2019

Name	ID #	Sr #	Sec. 25	Marks(out of 14):-
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Q1. Find the value of $\lim_{n \rightarrow \infty} \sum_{i=1}^n \frac{9}{n} \left(1 + \frac{3i}{n}\right)^2$.

Q2. If $\int_1^{10} f(x) dx = 5$ and $\int_2^1 f(x) dx = 3$, then find $\int_2^{10} (1 + f(x)) dx$.

Q3. A particle moves along a line so that its velocity at time t is $v(t) = t^3 - 4t$ m/s . Find the distance traveled during the time period $0 \leq t \leq 3$.

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Quiz # 1(d)

Time: 25 minutes

Date: 30-1-2019

Name	ID #	Sr #	Sec. 25	Marks(out of 14):-
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Q 1. Using four rectangles and taking the sample points to be right endpoints, estimate the area under the graph of $f(x) = 2 - x^2$ from $x = -1$ to $x = 1$

Q2. Find the value of $\lim_{n \rightarrow \infty} \sum_{i=1}^n \frac{10}{n} \sqrt{\frac{10n+4i}{2n}}$.

Q3. If $\int_1^{10} f(x) dx = 5$ and $\int_2^1 f(x) dx = 3$, then find $\int_2^{10} 2f(x) dx$.