

Math101 Term181
Sec13 Quiz 5

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

Q1) The **circumference of a sphere** was measured to be 22 cm with a possible error of 0.5 cm. The maximum error in the calculated **volume** is approximately equal to

- a) 800π
- b) 2π
- c) $\frac{11}{\pi}$
- d) 44π
- e) $\frac{121}{\pi^2}$

Q2) If $\cosh x = \frac{5}{4}$, $x < 0$ then $6 \operatorname{csch} x + 3 \operatorname{coth} x =$

- a) 13
- b) -6
- c) -3
- d) -13
- e) 14

Q3) The **SUM** of all critical numbers of the function

$$f(x) = \frac{x-2}{x^2+9} \text{ is}$$

a) 4

b) 2

c) 0

d) 3

e) 5

Q4) The absolute **minimum** value of $f(x) = x - \frac{4x}{x+1}$ on the interval $[0,3]$ is

a) 0

b) -1

c) -2

d) 3

e) -9

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Sec17 Quiz 5

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Q1) The **circumference of a sphere** was measured to be 20 cm with a possible error of 0.5 cm. The maximum error in the calculated **volume** is approximately equal to

a) $\frac{100}{\pi^2}$

b) 2π

c) $\frac{10}{\pi}$

d) 40π

e) 800π

Q2) If $f(x) = \operatorname{sech}\left(\frac{x}{2}\right)$, then $f'(\ln 4) =$

a) $-\frac{6}{25}$

b) $\frac{12}{25}$

c) $-\frac{3}{25}$

d) $\frac{16}{25}$

e) $-\frac{4}{25}$

Q3) The **SUM** of all critical numbers of the function $f(x) = \frac{x^2+1}{\sqrt{2x+1}}$ is

a) $-\frac{2}{3}$

b) $-\frac{1}{6}$

c) $-\frac{7}{6}$

d) $\frac{1}{3}$

e) $-\frac{3}{2}$

Q4) the absolute maximum M and absolute minimum m values of $f(x) = \cos^2 x - \cos x$ on the interval $[0, \pi]$ are

a) $M = 2$ and $m = 0$

b) $M = 2$ and $m = -1/4$

c) $M = 0$ and $m = -1/4$

d) $M = \pi$ and $m = \pi/3$

e) $M = \pi$ and $m = 0$

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Sec18 Quiz 5

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Q1) The **circumference of a sphere** was measured to be 24 cm with a possible error of 0.5 cm. The maximum error in the calculated **volume** is approximately equal to

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

b) 2π

c) $\frac{144}{\pi^2}$

d) 48π

e) 800π

Q2) If $\tanh x = \frac{-3}{4}$, then $12 \operatorname{csch} x + 8 \operatorname{sech} x =$

a) $6\sqrt{7}$

b) -10

c) $-6\sqrt{7}$

d) $-2\sqrt{7}$

e) 30

Q3) The **SUM** of all critical numbers of the function $f(x) = \sqrt{x^2 - 2x - 8}$ is

a) 2

b) 3

c) 1

d) -1

e) -4

Q4) The absolute maximum M and absolute minimum m values of $f(x) = \frac{\ln x}{x^2}$ on the interval $[1, e]$ are

a) $M = \frac{1}{2e}$ and $m = 0$

b) $M = \frac{1}{e^2}$ and $m = 0$

c) $M = 0$ and $m = -e$

d) $M = e^2$ and $m = e$

e) $M = \frac{1}{2e}$ and $m = \frac{1}{e^2}$

Math101 Term181
Sec 21 Quiz 5

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

Q1) The **circumference of a sphere** was measured to be 26 cm with a possible error of 0.5 cm. The maximum error in the calculated **volume** is approximately equal to

a) 2π

b) $\frac{169}{\pi^2}$

c) $\frac{13}{\pi}$

d) 52π

e) 800π

Q2) If $\coth x = -\frac{4}{3}$, then $6 \operatorname{csch} x + 4 \operatorname{sech} x =$

a) $3\sqrt{7}$

b) -5

c) $-3\sqrt{7}$

d) $-\sqrt{7}$

e) 15

Q3) The **SUM** of all critical numbers of the function

$$f(x) = \sqrt{x^2 - 2x - 15}$$

a) -3

b) 5

c) 1

d) 3

e) 2

Q4) the absolute maximum M and absolute minimum m values of $f(x) = \sin^2 x + \sin x$ on the interval $[0, \pi]$ are

a) $M = 2$ and $m = 0$

b) $M = \frac{\pi}{2}$ and $m = 0$

c) $M = \pi$ and $m = 0$

d) $M = \pi$ and $m = \frac{\pi}{2}$

e) $M = 0$ and $m = -\frac{\pi}{2}$