Math102 Term182
Sec2 Quiz 5

Name	ID	Sr

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

Q1) The area of the surface generated by revolving the curve

$$y = x^3 \quad , 0 \le x \le 1$$

about the x −axis is equals to

a) $\frac{\pi}{4}$

b) $\pi(10\sqrt{10} - 1)$

c) $\frac{\pi}{27}(10\sqrt{10} - 1)$

d) $\frac{4\pi}{3}$

e) $\frac{\pi}{54}(10\sqrt{10} - 1)$

Q2) $\lim_{n\to\infty}(ne^{1/n} - n) =$

a) 1

b) ∞

c) 0

d) 2

e) e^2

Q3)The sequence $\left\{\frac{2n}{n+1}+\frac{\cos(3n)}{3n+2}\right\}_{n=1}^{\infty}$

a) converges to $\frac{7}{3}$

b) diverges

c) converges to 2

d) converges to $2+\cos 3$

e) converges to 3

Q4) $\lim_{n\to\infty}\frac{2^n+3^n}{4^n+5^n}=$

a) 1

b) ∞

c) $\frac{5}{9}$

d) $\frac{\ln 2+\ln 3}{\ln 4+\ln 5}$

e) 0

f) $\frac{1}{2}$

Math102 Term182
Sec5 Quiz 5

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

Q1) The area of the surface generated by revolving the curve

$$y = \frac{1}{12}x^3 + \frac{1}{x} \quad , 1 \le x \le 2$$

about the $y-$axis is equals to

a) $\frac{\pi}{3}(1 + \ln 3)$

b) $2\pi(\frac{15}{16} + \ln 2)$

c) $2\pi(1 + \ln 2)$

d) $2\pi(\frac{17}{16} + \ln 2)$

e) $\pi(1 + \ln 2)$

Q2) $\lim_{n\to\infty} \frac{(\ln n)^2}{n} =$

a) 0

b) ∞

c) $\ln 2$

d) 2

e) e^2

Q3)The sequence $\left\{(n+2)\sin(\frac{5}{n})\right\}_{n=1}^{\infty}$

a) converges to $\cos 5$

b) diverges

c) converges to 7

d) converges to 2

e) converges to 5

Q4)The sequence $\left\{\frac{(-1)^n}{n^3}\frac{(4n+3)!}{(4n)!}\right\}_{n=1}^{\infty}$

a) converges to 0

b) diverges

c) converges to 4

d) converges to 16

e) converges to 2

f) converges to 64

Math102 Term182
Sec19 Quiz 5

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

Q1) The area of the surface generated by revolving the curve

$$y = 2\sqrt{5-x} \quad , 1 \le x \le 4$$

about the x −axis is equals to

a) $\frac{\pi}{3}$

b) $\frac{8\pi}{3}(5\sqrt{5} - 2\sqrt{2})$

c) $\frac{\pi}{27}(10\sqrt{10} - 1)$

d) $\frac{4\pi}{3}$

e) $\frac{4\pi}{3}(5\sqrt{5} - 2\sqrt{2}\,)$

Q2) $\lim_{n\to\infty} \sqrt[n]{2^{1+4n}} =$

a) e^4

b) 2

c) 0

d) 16

e) 1

f) e

Q3)The sequence $\left\{(3n+2)\sin(\frac{5}{n})\right\}_{n=1}^{\infty}$

a) converges to 10

b) diverges

c) converges to 15

d) converges to 2

e) converges to 7

f) converges to $3\sin 5$

Q4) $\lim_{n\to\infty}\left(1+\frac{3}{n}+\frac{5}{n^2}\right)^n =$

a) 0

b) ∞

c) e^3

d) 5

e) e^{15}

f) 1

Math102 Term182
Sec24 Quiz 5

Name	ID	Sr

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

Q1) The area of the surface generated by revolving the curve

$$y = \sqrt{1 + 4x} \quad , 0 \le x \le 1$$

about the x −axis is equals to

a) $\frac{\pi}{3}$

b) $\frac{\pi}{3}(27 - 5\sqrt{5})$

c) $\frac{\pi}{27}(10\sqrt{10} - 1)$

d) $\frac{4\pi}{3}$

e) $\frac{4\pi}{3}(27 - 5\sqrt{5})$

Q2) $\lim_{n\to\infty} n \tan(\frac{\pi}{n}) =$

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

b) π

c) 0

d) ∞

e) 1

Q3)The sequence $\left\{\frac{2n^2+1}{n^2+1}+\frac{\sin(4n)}{n+2}\right\}_{n=1}^{\infty}$

a) converges to $\frac{5}{2}$

b) diverges

c) converges to $2+\sin 4$

d) converges to 2

e) converges to 6

Q4)) $\lim_{n\to\infty}\left(1+\sin(\frac{1}{n})\right)^n =$

a) e

b) e^3

c) e^2

d) ∞

e) 1

f) $\sin 1$