

PRINTABLE VERSION

Quiz 10

You scored 0 out of 100

Question 1

You did not answer the question.

State whether the sequence converges as $n \rightarrow \infty$; if it does, find the limit.

$$\left(\frac{12}{n}\right)^n$$

- a) diverges
- b) converges to 0
- c) converges to 12
- d) converges to 1
- e) converges to 11

Question 2

You did not answer the question.

State whether the sequence converges as $n \rightarrow \infty$; if it does, find the limit.

$$\frac{7 \ln(n)}{n}$$

- a) converges to 1
- b) diverges
- c) converges to 7
- d) converges to $\ln(7)$
- e) converges to 0

Question 3

You did not answer the question.

State whether the sequence converges as $n \rightarrow \infty$; if it does, find the limit.

$$\frac{7^n + 1}{8^n - 1}$$

a) converges to 1

b) diverges

c) converges to $\frac{1}{8}$

d) converges to $\frac{7}{8}$

e) converges to 0

Question 4

You did not answer the question.

State whether the sequence converges as $n \rightarrow \infty$; if it does, find the limit.

$$\int_0^n e^{-5x} dx$$

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

b) converges to e^{-5}

c) converges to 1

d) converges to 0

e) diverges

Question 5

You did not answer the question.

State whether the sequence converges as $n \rightarrow \infty$; if it does, find the limit.

$$\int_{-n}^n \frac{9}{1+x^2} dx$$

- a) diverges
- b) converges to 0
- c) converges to $\frac{9}{2} \pi$
- d) converges to 9π
- e) converges to 1

Question 6

You did not answer the question.

State whether the sequence converges as $n \rightarrow \infty$; if it does, find the limit.

$$n^9 \sin(n \pi)$$

- a) converges to -1
- b) converges to 1
- c) converges to 0
- d) converges to 9
- e) diverges

Question 7

You did not answer the question.

State whether the sequence converges as $n \rightarrow \infty$; if it does, find the limit.

$$\int_{\frac{1}{n}}^1 \frac{1}{x^{9/10}} dx$$

- a) diverges
- b) converges to 9
- c) converges to $\frac{10}{9}$

d) converges to 10

e) converges to 1

Question 8

You did not answer the question.

State whether the sequence converges as $n \rightarrow \infty$; if it does, find the limit.

$$\frac{n!}{(12n)}$$

a) converges to 0

b) diverges

c) converges to -1

d) converges to 1

e) converges to 1200

Question 9

You did not answer the question.

State whether the sequence converges as $n \rightarrow \infty$; if it does, find the limit.

$$\frac{n^n}{3^{n^2}}$$

a) diverges

b) converges to $\frac{1}{3}$

c) converges to $\frac{1}{9}$

d) converges to 0

e) converges to 1

Question 10

You did not answer the question.

State whether the sequence converges as $n \rightarrow \infty$; if it does, find the limit.

$$\left(1 + \frac{3}{5n}\right)^{5n}$$

- a) converges to 1
- b) converges to e^3
- c) converges to $e^{\frac{3}{5}}$
- d) diverges
- e) converges to e^3

Question 11

You did not answer the question.

Calculate the limit.

$$\lim_{x \rightarrow 0^+} \frac{\sin(x)}{(5\sqrt{x})}$$

- a) 0
- b) -5
- c) 5
- d) -1
- e) 1

Question 12

You did not answer the question.

Calculate the limit.

$$\lim_{x \rightarrow 2} \frac{x-2}{x^2-4}$$

- a) 0
- b) 1

c) $-\frac{1}{4}$

d) -1

e) $\frac{1}{4}$

Question 13

You did not answer the question.

Calculate the limit.

$$\lim_{x \rightarrow 0} \frac{10^x - 1}{x}$$

a) 1

b) -1

c) $-\ln(10)$

d) $\ln(10)$

e) 0

Question 14

You did not answer the question.

Calculate the limit.

$$\lim_{x \rightarrow 0} \frac{e^x + e^{-x} - 2}{(1 - \cos(12x))}$$

a) 1

b) $\frac{1}{72}$

c) $\frac{1}{36}$

d) 0

e) 72

Question 15

You did not answer the question.

Calculate the limit.

$$\lim_{x \rightarrow 0} \frac{(3 + 3x - 3e^x)}{(4x(e^x - 1))}$$

a) $-\frac{3}{4}$

b) $\frac{3}{8}$

c) $-\frac{8}{3}$

d) $-\frac{3}{8}$

e) 0

Question 16

You did not answer the question.

Calculate the limit.

$$\lim_{x \rightarrow 0} \frac{(5x - 5 \tan(x))}{(4x - 4 \sin(x))}$$

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

b) -5

c) 0

d) $-\frac{2}{5}$

e) $-\frac{5}{2}$

Question 17

You did not answer the question.

Calculate the limit.

$$\lim_{x \rightarrow 0} \frac{(\cos(x) - \cos(5x))}{(\sin(x^2))}$$

- a) 24
- b) 12
- c) -12
- d) 1
- e) 0

Question 18

You did not answer the question.

Calculate the limit.

$$\lim_{x \rightarrow \infty} \frac{\left(\frac{1}{2}\pi - \arctan(x)\right)}{\left(\frac{9}{x}\right)}$$

- a) 1
- b) $-\frac{1}{9}$
- c) 0
- d) $\frac{2}{9}$
- e) $\frac{1}{9}$

Question 19

You did not answer the question.

Calculate the limit.

$$\lim_{x \rightarrow \infty} \frac{6}{x (\ln(x+5) - \ln(x))}$$

- a) 1
- b) $\frac{5}{6}$
- c) $\frac{6}{5}$
- d) 0
- e) $-\frac{6}{5}$

Question 20

You did not answer the question.

Find values for a and b such that

$$\lim_{x \rightarrow 0} \frac{\cos(ax) - b}{(2x^2)} = -100$$

- a) $[a = (20, -20), b = 0]$
- b) $[a = (-10, 10), b = 1]$
- c) $[a = (-20, 20), b = 1]$
- d) $[a = (-40, 40), b = 2]$
- e) $[a = (-20, 20), b = -1]$