$(\frac{1}{2} \rightarrow 0)$

You scored 0 out of 100

Question I

You did not answer the question.

Calculate the I mit.

$$\lim_{\lambda \to \infty} 6 x^4 \sin\left(\frac{1}{x}\right) = \lim_{\lambda \to \infty} \frac{\sin(x)}{\frac{1}{6x^4}}$$

$$\lim_{x \to \infty} \frac{\frac{1}{x^2} \cdot \cos(x)}{\frac{-4}{6x^5}} = \lim_{x \to \infty} \frac{1}{x^2} \cdot \cos(x)$$

$$\lim_{x \to \infty} 6x^{4} \sin\left(\frac{1}{x}\right) \underbrace{\frac{1}{2}}_{\text{(N,O)}} \lim_{x \to \infty} \frac{\sin(x)}{\frac{1}{6x^{4}}}$$

$$\underbrace{\frac{1}{2} \lim_{x \to \infty} \frac{1}{6x^{5}} \cos(\frac{1}{x})}_{\text{(N,O)}} = \lim_{x \to \infty} \frac{3x^{5}}{2x^{2}} \cos(\frac{1}{x})$$

$$= M \cdot 1 = M$$

Question 2

You did not answer the question.

Calculate the lanit.

$$\lim_{x \to \infty} \frac{5 \ln x}{x} = \lim_{x \to \infty} \frac{5 \cdot x}{x} = \lim_{x$$

combine

You did not answer the question.

Calculate the limit

$$\lim_{x \to \infty} \frac{\left(3\sqrt{1+x^2}\right)}{\left(2x^2\right)} \to 0$$

$$\log\left(3\sqrt{1+x^2}\right) = \left|\left(2x^2\right)\right|$$

$$\log\left(2x^2\right)$$

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

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

e) 👵
$$\frac{3}{2}$$

Question 4

Take On lim
$$\ln x^{\left(\frac{5}{x-1}\right)} = \lim_{x \to 1} \left(\frac{5}{x+1}\right) = \ln x$$

$$\frac{1}{x+1} = \lim_{x \to 1} \left(\frac{5}{x+1}\right) = \lim_{x \to 1} \left(\frac{5}{x+1}\right) = 1$$

$$\frac{1}{x+1} = \lim_{x \to 1} \left(\frac{5}{x+1}\right) = 1$$

$$\frac{1}{x+1} = \frac{5}{x+1} = \frac{5}{x+$$

Question 5

You did not answer the question.

Calculate the limit

$$(N-N)$$

$$\lim_{x\to 0} \left(\frac{9}{x} - 9\cot(x)\right) = \lim_{x\to 0} \frac{9}{x + 70} \times \frac$$

Ouestion 6

You did not answer the question.

Fundamental thm. of calculus
$$(0 \times 1) = \lim_{x \to 1} \left(\frac{0}{x}\right) \left(\frac{1}{x+1}\right) dx$$
 $(0 \times 1) = \lim_{x \to 1} \left(\frac{1}{x+1}\right) dx$ $(0 \times 1) = \lim_{x$

Calculate the holic.

$$(N-N) = \lim_{x \to 0} \left(\frac{4}{\sin(x)} - \frac{4}{x}\right) = \lim_{x \to 0} \frac{4x}{x \sin(x)}$$

$$(N-N) = \lim_{x \to 0} \left(\frac{4}{\sin(x)} - \frac{4}{x}\right) = \lim_{x \to 0} \frac{4x}{x \sin(x)}$$

$$(N-N) = \lim_{x \to 0} \frac{4x}{x \cos(x)}$$

$$(N-N) = \lim_{x \to 0} \frac{4x}{x \cos(x)}$$

$$(N-N) = \lim_$$

1 1

You did not answer the question.

Question 9

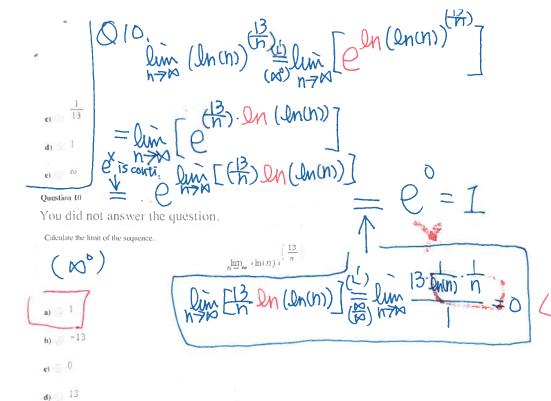
You did not answer the question.

You did not answer the question.

Consider the limit or the sequence.

K is fixed.

Lin.
$$\frac{n^2}{13^2} \left(\frac{1}{80}\right) \lim_{n \to \infty} \frac{1}{2} \lim_{$$



Ouestion II

You did not answer the question.

Evaluate the improper integral

$$\int_{0}^{\infty} \frac{10}{4+x^{2}} dx = \lim_{b \to \infty} \int_{0}^{b} \frac{10}{4+x^{2}} dx$$

a)
$$\frac{5\pi}{4\pi} = \lim_{b \to \infty} \left[\frac{10 \operatorname{arctan}(x)}{2} \right]_{0}^{b}$$
b) $\frac{\frac{5}{4}\pi}{4\pi} = \lim_{b \to \infty} \left[\frac{5 \operatorname{arctan}(x)}{2} - 0 \right]$
d) $\frac{\frac{5}{4}\pi}{4\pi} = \frac{5}{5} \cdot \frac{17}{2} \left(\frac{\operatorname{arctan}(x)}{2} - \frac{77}{2} \cdot \frac{35}{5} + \frac{78}{2} \right)$

Ouestion 12

You did not answer the question.

Evaluate the improper integral.

Evaluate the improper integral.

a)
$$\frac{4}{x^{2/3}} dx = \lim_{\alpha \to 0} \int_{0}^{64} \frac{4}{x^{\frac{2}{3}}} dx$$

a) $\frac{24}{x^{\frac{2}{3}}} = \lim_{\alpha \to 0} \left[\frac{4}{3} \cdot \frac{3}{x^{\frac{2}{3}}} \cdot \frac{3}{x^{\frac{2}{3}}} \right]$

b) $\frac{48}{x^{\frac{2}{3}}} = \lim_{\alpha \to 0} \left[\frac{1}{12} \cdot \left(\frac{64}{3} - \frac{1}{12} - \frac{3}{3} \right) \right]$

e) $\frac{32}{x^{\frac{2}{3}}} = \frac{12 \cdot 4}{12 \cdot 64} = \frac{48}{x^{\frac{2}{3}}}$

Ouestion 13

You did not answer the question.

Evaluate the improper integral.

$$\int_{0}^{10} \sqrt{1-x^2} dx = \lim_{b \neq I} \int_{0}^{b} \sqrt{1-x^2} dx$$

$$= \lim_{b \neq I} \int_{0}^{10} \sqrt{1-x^2} dx = \lim_{b \neq I} \int_{0}^{10} \sqrt{1-x^2} dx$$

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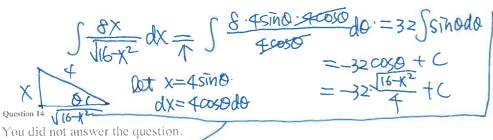
$$= \lim_{b \neq I} \int_{0}^{10} \sqrt{1-x^2} dx = \lim_{b \neq I} \int_{0}^{10} \sqrt{1-x^2} dx$$

$$= \lim_{b \neq I} \int_{0}^{10} \sqrt{1-x^2} dx = \lim_{b \neq I} \int_{0}^{10} \sqrt{1-x^2} dx$$

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$$= \lim_{b \neq I} \int_{0}^{10} \sqrt{1-x^2} dx = \lim_{b \neq I} \int_{0}^{10} \sqrt{1-x^2} dx$$

$$= \lim_{b \neq I} \int_{0}^{10} \sqrt{1-x^2} dx = \lim_{h$$



Question 15

You did not answer the question.

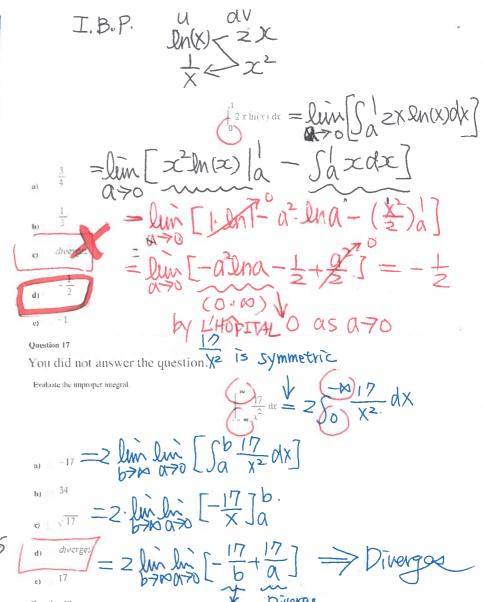
Evaluate the improper integral

$$\int_{c^{2}}^{\infty} \frac{d \ln(x)}{x} dx = \lim_{b \to \infty} \left[\int_{c^{2}}^{b} \frac{d \ln(x)}{x} dx \right]$$
a)
$$\int_{c^{2}}^{\infty} \frac{d \ln(x)}{x} dx = \lim_{b \to \infty} \left[\int_{c^{2}}^{b} \frac{d \ln(x)}{x} dx \right]$$
b)
$$\int_{c}^{\infty} \frac{d \ln(x)}{x} dx = \lim_{b \to \infty} \left[\int_{c^{2}}^{b} \frac{d \ln(x)}{x} dx \right]$$
b)
$$\int_{c^{2}}^{\infty} \frac{d \ln(x)}{x} dx = \lim_{b \to \infty} \left[\int_{c^{2}}^{b} \frac{d \ln(x)}{x} dx \right]$$
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b)
$$\int_{c^{2}}^{\infty} \frac{d \ln(x)}{x} dx = \lim_{b \to \infty} \left[\int_{c^{2}}^{b} \frac{d \ln(x)}{x} dx \right]$$
b)

Question 16

You did not answer the question.

Evaluate the improper integral.



Question 18

You did not answer the question.

Evaluate the improper integral

$$\int_{\frac{1}{3}}^{3} \frac{10}{(3x-1)^{1/3}} \, \mathrm{d}x$$

$$\frac{3}{3} \frac{10}{(3x-1)^{\frac{1}{3}}} dx = \lim_{\alpha \neq \frac{1}{3}} \frac{10}{(3x-1)^{\frac{1}{3}}} dx$$

$$= \lim_{\alpha \neq \frac{1}{3}} \left[10 \frac{3}{2} \cdot \frac{1}{3} (3x-1)^{\frac{2}{3}} \right] \frac{3}{3}$$

$$= \lim_{\alpha \neq \frac{1}{3}} \left[5 \cdot (3x-1)^{\frac{2}{3}} \right] \frac{3}{3}$$

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$$= \lim_{\alpha \neq \frac{1}{3}} \left[5 \cdot (3x-1)^{\frac{2}{3}} \right] \frac{3}{3}$$

$$= \lim_{\alpha \to \infty} \left[5 \cdot (3x-1)^{\frac{2}{3}} \right] \frac{3}{3}$$

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$$= \lim_{\alpha \to \infty} \left[5 \cdot$$

$$\int_{-3}^{2} \frac{dx}{x^{2}} = \int_{-3}^{-2} \frac{1}{x^{2}} + \frac{1}{x^{2}} dx$$

$$= \lim_{Question 20} \left[-\frac{1}{4} \ln |b+2| + \frac{1}{4} \ln |+1| \right] \rightarrow Diverge$$
You did not answer the question. $Diverg$

Evaluate the improper integral

$$=\lim_{\alpha \to 0} \left[7 \cdot 2\sqrt{\frac{\sin(x)}{\sin(x)}} dx = \lim_{\alpha \to 0} \left[\frac{2}{\sqrt{\sin(x)}} \frac{7\cos(x)}{\sin(x)} dx\right]$$

$$=\lim_{\alpha \to 0} \left[7 \cdot 2\sqrt{\frac{\sin(x)}{\sin(x)}}\right] = \lim_{\alpha \to 0} \left[14\sqrt{\frac{\pi}{\sin(x)}} - 14\sqrt{\frac{\pi}{\sin(x)}}\right]$$

$$= 14 \cdot \sqrt{1 - 0} = 14$$

			*
		9	