PRINTABLE VERSION

Quiz 5

You scored 0 out of 100

Question 1

You did not answer the question.

Calculate the integral:

$$\int_0^3 \frac{x^3}{8+x^4}\,dx$$

a) $\ln(89)$

b) $-\ln(89)$

c) $-\frac{1}{4}\ln\left(\frac{89}{8}\right)$

d) $\ln\left(\frac{89}{8}\right)$

e) $\frac{1}{4}\ln\left(\frac{89}{8}\right)$

Question 2

You did not answer the question.

Calculate the integral:

$$\int \frac{5x}{\sqrt{2-x^2}}\,dx$$

a) $-10\sqrt{2-x^2}+C$

b) $10-5x^2+C$

c) $\frac{10x}{\sqrt{2-x^2}}+C$

d) $5\sqrt{2-x^2}+C$

e) $-5\sqrt{2-x^2}+C$

Question 3

You did not answer the question.

Calculate the integral:

$$\int_1^2 \frac{e^{\left(\frac{8}{x}\right)}}{x^2}\,dx$$

a) $-\frac{1}{8}e^8+\frac{1}{8}e^4$

b) e^8+e^4

c) $\frac{1}{8}e^8-\frac{1}{8}e^4$

d) $\frac{1}{8}e^8+\frac{1}{8}e^4$

e) e^8-e^4

Question 4

You did not answer the question.

Calculate the integral:

$$\int \frac{9\,e^x}{9+e^{2x}}\,dx$$

a) $\frac{1}{3}\arctan\left(\frac{1}{9}e^x\right)+C$

b) $\frac{1}{3}\arctan\left(e^x\right)+C$

c) $3\arctan\left(\frac{1}{3}e^x\right)+C$

d) $3 \arctan\left(e^{x}\right) + C$

e) $3\, e^{2x} + C$

Question 5

You did not answer the question.

Calculate the integral:

$$\int \cosh(6x)\, \sinh^{5}(6x)\, dx$$

a) $\frac{1}{24} \cosh^{4}(6x) + C$

b) $\frac{1}{24} \sinh^{4}(6x) + C$

c) $\frac{1}{36} \cosh^{6}(6x) + C$

d) $\frac{1}{36} \sinh^{6}(6x) + C$

e) $\frac{1}{6} \sinh^{6}(6x) + C$

Question 6

You did not answer the question.

Calculate the integral:

$$\int 6x\, e^{-9x}\, dx$$

a) $-\frac{2}{3} e^{-9x} + x\, e^{-9x} + C$

b) $-\frac{1}{81} e^{-9x} + C$

c) $-\frac{2}{27} e^{-9x} - \frac{2}{3} x\, e^{-9x} + C$

d) $-\frac{2}{3}e^{9x}-\frac{2}{3}xe^{-9x}+C$

e) $\frac{2}{27}e^{-9x}+\frac{2}{3}xe^{-9x}+C$

Question 7

You did not answer the question.

Calculate the integral:

$$\int_1^{e^3} x\ln\left(\sqrt{x}\right)dx$$

a) $\frac{1}{16}+\frac{5}{16}e^6$

b) $\frac{3}{16}+\frac{15}{16}e^6$

c) $\frac{1}{8}+\frac{5}{8}e^6$

d) $\frac{3}{8}+\frac{15}{8}e^6$

e) $\frac{1}{4}+\frac{5}{4}e^6$

Question 8

You did not answer the question.

Calculate the integral.

$$\int\frac{\tan(\ln(6x+4))}{6x+4}dx$$

a) $\frac{1}{6}\sec^2(6x+4)+C$

b) $\frac{1}{6}\ln|\sec(\ln(6x+4))|+C$

c) $-\ln|\sec(\ln(6x+4))|+C$

d) $-\frac{1}{6}\ln|\sec(\ln(6x+4))|+C$

e) $\ln|\sec(\ln(6x+4))|+C$

Question 9

You did not answer the question.

Calculate the integral.

$$\int(\sec(5x)-3)^2\,dx$$

a) $-\frac{1}{5}\tan(5x)+\frac{6}{5}\ln|\sec(5x)+\tan(5x)|-9x+C$

b) $\frac{1}{5}\tan(5x)-\frac{6}{5}\ln|\sec(5x)+\tan(5x)|+9x+C$

c) $\tan(5x)+9x+C$

d) $\frac{1}{5}\tan(5x)+9x+C$

e) $-\tan(5x)+6\ln|\sec(5x)+\tan(5x)|-45x+C$

Question 10

You did not answer the question.

Calculate the integral.

$$\int\frac{x}{6+5x^2}\,dx$$

a) $-\frac{1}{10}\ln(|6+5x^2|)+C$

b) $\frac{1}{10}\ln(|6+5x^2|)+C$

c) $\frac{1}{2}\ln(|6+5x^2|)+C$

d) $-\frac{5x}{(6+5x^2)^2}+C$

e) $-\frac{5}{(6+5x^2)^2}+C$

Question 11

You did not answer the question.

Calculate the given integral:

$$\int \frac{4x}{\sqrt{8-x^2}}\,dx$$

a) $-32+4x^2+C$

b) $-\frac{4}{(8-x^2)^{3/2}}+C$

c) $4\sqrt{8-x^2}+C$

d) $4(8-x^2)^{3/2}+C$

e) $-4\sqrt{8-x^2}+C$

Question 12

You did not answer the question.

Calculate the given integral:

$$\int \frac{3x^2}{\sqrt{4-x^2}}\,dx$$

a) $-\frac{3}{4}x\sqrt{4-x^2}+3\arcsin\left(\frac{1}{2}x\right)+C$

b) $-\frac{3}{2}x\sqrt{4-x^2}+6\arcsin\left(\frac{1}{2}x\right)+C$

c) $\frac{3}{2}x\sqrt{4-x^2}-6\arcsin\left(\frac{1}{2}x\right)+C$

d) $-3x\sqrt{4-x^2}+12\arcsin\left(\frac{1}{2}x\right)+C$

e) $\frac{3}{2}\frac{x}{(4-x^2)^{3/2}}+\frac{3}{2}\arctan\left(\frac{x}{\sqrt{4-x^2}}\right)+C$

Question 13

You did not answer the question.

Calculate the given integral:

$$\int \frac{3x^2}{\sqrt{7+x^2}}\,dx$$

a) $\frac{3}{2(7+x^2)^{3/2}}+C$

b) $\frac{3}{2}x\sqrt{7+x^2}-\frac{21}{2}\ln\left|x+\sqrt{7+x^2}\right|+C$

c) $\frac{3}{2}x\sqrt{7+x^2}+\frac{3}{2}\ln\left|x+\sqrt{7+x^2}\right|+C$

d) $\frac{3}{2}\frac{x}{(7+x^2)^{3/2}}-\frac{21}{2}\ln\left|\left(\sqrt{7+x^2}\right)\right|+C$

e) $\frac{3}{2}\sqrt{7+x^2}+21\ln\left|x+(7+x^2)^{3/2}\right|+C$

Question 14

You did not answer the question.

Calculate the given integral:

$$\int_0^{\frac{1}{2}} \frac{11x^2}{(1-x^2)^{3/2}}\,dx$$

a) $\frac{11}{3}\sqrt{3}+\frac{11}{3}\pi$

b) $\frac{11}{3}\sqrt{3} - \frac{11}{6}\pi$

c) $33\sqrt{3} - \frac{11}{3}\pi$

d) $\frac{11}{6}\sqrt{3} - \frac{1}{6}\pi$

e) $11\sqrt{3} + \frac{11}{6}\pi$

Question 15

You did not answer the question.

Calculate the given integral:

$$\int_0^2 \frac{4x^3}{\sqrt{4-x^2}}\,dx$$

a) $\frac{32}{3}$

b) $\frac{128}{3}$

c) 32

d) $\frac{64}{3}$

e) $\frac{128}{9}$

Question 16

You did not answer the question.

Calculate the given integral:

$$\int \frac{2x^2}{(x^2+7)^{3/2}}\,dx$$

a) $-\frac{x}{\sqrt{x^2+7}} - 2\ln\left|x+\sqrt{x^2+7}\right| + C$

b) $-\frac{2x}{(x^2+7)^{5/2}} - 2\ln\left|x+(x^2+7)^{3/2}\right| + C$

c) $-\frac{2x}{\sqrt{x^2+7}} + 2\ln\left|x+\sqrt{x^2+7}\right| + C$

d) $\frac{2x}{(x^2+7)^{5/2}} + 2\ln\left|x+\sqrt{x^2+7}\right| + C$

e) $\frac{x}{\sqrt{x^2+7}} - \ln\left|2x+\sqrt{x^2+7}\right| + C$

Question 17

You did not answer the question.

Calculate the given integral:

$$\int_0^7 2\sqrt{49-x^2}\,dx$$

a) $\frac{147}{2}\pi$

b) $\frac{147}{4}\pi$

c) $\frac{49}{2}\pi$

d) 49π

e) $\frac{49}{3}\pi$

Question 18

You did not answer the question.

Calculate the given integral:

$$\int \frac{2}{x^2\sqrt{49+x^2}}\,dx$$

a) $\frac{2}{49}\,\frac{\sqrt{49+x^2}}{x}+C$

b) $-\frac{2}{49}\,\frac{(49+x^2)^{3/2}}{x}+C$

c) $-\frac{2}{49}\,\frac{\sqrt{49+x^2}}{x}+C$

d) $-\frac{2}{49}\sqrt{49+x^2}+C$

e) $\frac{2}{7\,(49+x^2)^{3/2}}+C$

Question 19

You did not answer the question.

Calculate the given integral:

$$\int \frac{2}{e^x\sqrt{6+e^{2x}}}\,dx$$

a) $-\frac{2\sqrt{6+e^{2x}}}{e^x}+C$

b) $-\frac{1}{3}\,(6+e^{2x})^{3/2}+C$

c) $-\frac{1}{3}\,\frac{\sqrt{6+e^{2x}}}{e^x}+C$

d) $\frac{1}{3}\,\frac{\sqrt{6+e^{2x}}}{e^x}+C$

e) $\dfrac{2\left(6+e^{2x}\right)^{3/2}}{e^{x}}+C$

Question 20

You did not answer the question.

Calculate the given integral:

$$\int \frac{x+5}{\sqrt{x^2+10x+10}}\,dx$$

a) $-\left(x^2+10x+10\right)^{3/2}+C$

b) $\sqrt{x^2+10x+10}+C$

c) $2x\sqrt{x^2+10x+10}+C$

d) $-x\sqrt{x^2+10x+10}+C$

e) $\left(x^2+10x+10\right)^{3/2}+C$