Make-up Quiz 2

⚠ This is a preview of the published version of the quiz

Started: Nov 3 at 9:17am

Quiz Instructions

Question 1	1 pts

Find the derivative of the function $f(x) = \dfrac{1}{\sqrt{x}} - \dfrac{1}{\sqrt[7]{x^5}}$

○ $\dfrac{5}{7x^{12/7}} - \dfrac{1}{2x^{3/2}}$

○ $-\dfrac{5}{7x^{12/7}} + \dfrac{1}{2x^{3/2}}$

○ $\dfrac{12}{7x^{12/7}} + \dfrac{1}{2x^{3/2}}$

○ $\dfrac{1}{2x^{12/7}} - \dfrac{5}{2x^{3/2}}$

Question 2	1 pts

Find f' in terms of f and g' for $f(x) = x^4 g(x^4)$ with $x \neq 0$.

○ $4xf(x) + 4x^7 g'(x^4)$

○ $4x^3 g(x) + 4x^2 g'(x^4)$

○ $2f(x) + 4x^7 g'(x^4)$

○ $\dfrac{4}{x} f(x) + 4x^7 g'(x^4)$

Question 3

1 pts

Find the equation of the tangent line to the curve $x^2 + 4xy + y^2 = 13$ at the given point $(1, 2)$.

○ $2y = -\dfrac{1}{2}x + \dfrac{11}{2}$

○ $y = -\dfrac{5}{4}x + \dfrac{13}{4}$

○ $y = -\dfrac{3}{4}x + \dfrac{1}{4}$

○ $y = \dfrac{3}{4}x - \dfrac{13}{4}$

Question 4	**1 pts**

Solve the equation for x: $e^{2e^x} = 4$.

○ $\ln(\ln(4))$

○ $\ln(-\ln(1/2))$

○ $[\ln(2)]^2$

○ e^4

Question 5	**1 pts**

Solve the equation for x: $\ln(x+1) + \ln(x-1) = 1$

○ $\sqrt[4]{2+e}$

○ $1+e$

○ 0

○ $\sqrt{e+1}$

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