

Solution and Rubric for Quiz 3 (Wed Sep 17)

Problem: Compute the derivative of $84\sqrt{x} + 7x^6 - 6x^7 - 41$

Solution:

Using the constant multiple, power, constant, and square root rules we compute

$$\begin{aligned}\frac{d}{dx} (84\sqrt{x} + 7x^6 - 6x^7 - 41) &= 84 \left(\frac{1}{2\sqrt{x}} \right) + 7(6x^5) - 6(7x^6) - 0 \\ &= \boxed{\frac{42}{\sqrt{x}} + 42x^5 - 42x^6}\end{aligned}$$

Rubric:

- Correct answer fully supported by clear and correct work: 1 point
- Otherwise: 0 points

Note:

- While the number of points varies from quiz to quiz, when computing your final grade each quiz is worth the same amount. Each quiz is converted to a percentage before taking the average.