

No notes or calculators. Show all work.

Find the derivatives of the functions below.

1. (5 points)

$$f(x) = \frac{4x^3 - x^2 + 2x - 9}{\sqrt{x}}$$

2. (5 points)

$$f(x) = (12x^3 + \sqrt[3]{x} + 100) (8\sqrt{x} - 7x^2 + 5x - 9)$$