

Find the derivative of each function

1. $f(x) = x^5 - \frac{1}{8}x^2 + \frac{1}{4}x$

2. $f(x) = \sqrt{x} + 1 + \frac{1}{\sqrt{x}}$

3. $f(x) = x^{-5} - \frac{1}{8}x^{-2} + \frac{1}{x}$

4. $f(x) = \frac{2}{x^{-3}} + \frac{5}{x^2} - \frac{3}{x}$

Find the horizontal tangents to the curve

5. $f(x) = x^3 - 3x^2 + 2$

Find the derivative of each function

$$1. f(x) = (x^2 + 2)(x^2 - 5x) \quad 2. f(x) = \frac{x^2 + 1}{2x}$$

$$3. f(x) = (x - 2) \left(\frac{1}{x} + \sqrt{x} \right) \quad 4. f(x) = \frac{2x + 1}{2x - 1}$$

Find the horizontal tangents to the curve

$$5. f(x) = \frac{5}{3}x^3 + 7x^2 - 3x + 9$$