Rules for differentiation. Tangent and normal lines.

3.2.1

    a. $y'(x) = 5x^4 - 14x + 10$

    b. $f'(t) = \frac{1}{4}t^{-\frac{3}{4}} + \frac{1}{3}t^{-\frac{2}{3}}$

    c. $f'(x) = \frac{15}{4}x^{\frac{1}{2}} + \frac{3}{2}x^{-2} - \frac{3}{4}x^{-\frac{5}{2}}$

3.2.2

$(1,0), \ (-1,0), \ \left(\frac{1}{\sqrt{3}}, \frac{-8}{3\sqrt{3}}\right), \ \left(\frac{-1}{\sqrt{3}}, \frac{8}{3\sqrt{3}}\right)$

3.2.3

$\dfrac{49}{6}$