

Calculus 120**Chain Rule**

Use the chain rule to differentiate the following:

1. $F(x) = (5 - 3x)^7$

2. $F(x) = (2x^2 + 1)^{20}$

3. $G(x) = (x^3 + x^2 - 2)^{3/4}$

4. $G(x) = \sqrt{x^4 - x + 1}$

5. $y = \sqrt[4]{x^2 + x}$

6. $y = (1 + 3x + 4x^2)^{-3}$

7. $y = \frac{1}{(x^3 + 2x^2 + 1)^2}$

8. $y = \frac{4}{(\sqrt{9 - x^2})}$

9. $y = (1 + 2\sqrt{x})^6$

10. $y = \sqrt{x + \sqrt{x}}$