

Derivatives

Moderate

Chain Rule

1. $\frac{d}{dx}(\cos(2x))$

2. $\frac{d}{dx}(\sqrt{2x^2 + 5})$

3. $\frac{d}{dx}(3^x)$

4. $\frac{d}{dx}(\sin^2(x))$

5. $\frac{d}{dx}(e^{x^2})$

6. $\frac{d}{dx}(\ln(x^2 - 5x))$

7. $\frac{d}{dx}(\sqrt{2x^2 - 1})$

8. $\frac{d}{dx}((4x - 3)^3)$

9. $\frac{d}{dx}((2x + 6)^2)$

10. $\frac{d}{dx}(\tan(2x))$

Answers**Derivatives****Moderate****Chain Rule**

1. $-\sin(2x) \cdot 2$

2. $\frac{2x}{\sqrt{2x^2 + 5}}$

3. $3^x \ln(3)$

4. $\sin(2x)$

5. $e^{x^2} \cdot 2x$

6. $\frac{2x - 5}{x^2 - 5x}$

7. $\frac{2x}{\sqrt{2x^2 - 1}}$

8. $12(4x - 3)^2$

9. $4(2x + 6)$

10. $\sec^2(2x) \cdot 2$