

(5) $\frac{1}{x^2} = x^{-2}$ $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$ $\frac{d}{dx} \frac{1}{x^2} = -\frac{2}{x^3}$

(6) $\frac{1}{x^3} = x^{-3}$ $\frac{d}{dx} x^{-3} = -3x^{-4} = -\frac{3}{x^4}$ $\frac{d}{dx} \frac{1}{x^3} = -\frac{3}{x^4}$

(7) $\frac{1}{x^4} = x^{-4}$ $\frac{d}{dx} x^{-4} = -4x^{-5} = -\frac{4}{x^5}$ $\frac{d}{dx} \frac{1}{x^4} = -\frac{4}{x^5}$

(8) $\frac{1}{x^5} = x^{-5}$ $\frac{d}{dx} x^{-5} = -5x^{-6} = -\frac{5}{x^6}$ $\frac{d}{dx} \frac{1}{x^5} = -\frac{5}{x^6}$

(9) $\frac{1}{x^6} = x^{-6}$ $\frac{d}{dx} x^{-6} = -6x^{-7} = -\frac{6}{x^7}$ $\frac{d}{dx} \frac{1}{x^6} = -\frac{6}{x^7}$

4. $\frac{1}{x^2} = x^{-2}$ $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$ $\frac{d}{dx} \frac{1}{x^2} = -\frac{2}{x^3}$

5. (a) $\frac{1}{x^3} = x^{-3}$ $\frac{d}{dx} x^{-3} = -3x^{-4} = -\frac{3}{x^4}$ $\frac{d}{dx} \frac{1}{x^3} = -\frac{3}{x^4}$

(b) $\frac{1}{x^4} = x^{-4}$ $\frac{d}{dx} x^{-4} = -4x^{-5} = -\frac{4}{x^5}$ $\frac{d}{dx} \frac{1}{x^4} = -\frac{4}{x^5}$

