

2. $\frac{1}{x^2} = x^{-2}$ $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$ $\frac{d}{dx} \frac{1}{x^2} = -\frac{2}{x^3}$
3. $\frac{1}{x^3} = x^{-3}$ $\frac{d}{dx} x^{-3} = -3x^{-4} = -\frac{3}{x^4}$ $\frac{d}{dx} \frac{1}{x^3} = -\frac{3}{x^4}$
4. $\frac{1}{x^4} = x^{-4}$ $\frac{d}{dx} x^{-4} = -4x^{-5} = -\frac{4}{x^5}$ $\frac{d}{dx} \frac{1}{x^4} = -\frac{4}{x^5}$
5. $\frac{1}{x^5} = x^{-5}$ $\frac{d}{dx} x^{-5} = -5x^{-6} = -\frac{5}{x^6}$ $\frac{d}{dx} \frac{1}{x^5} = -\frac{5}{x^6}$

4. $\frac{d}{dx} x^4 = 4x^3$ $\frac{d}{dx} x^3 = 3x^2$ $\frac{d}{dx} x^2 = 2x$ $\frac{d}{dx} x = 1$ $\frac{d}{dx} x^0 = 0$

5. (a) $\frac{d}{dx} x^3 = 3x^2$ $\frac{d}{dx} x^2 = 2x$ $\frac{d}{dx} x = 1$ $\frac{d}{dx} x^0 = 0$

(b) $\frac{d}{dx} x^4 = 4x^3$ $\frac{d}{dx} x^3 = 3x^2$ $\frac{d}{dx} x^2 = 2x$ $\frac{d}{dx} x = 1$ $\frac{d}{dx} x^0 = 0$

(a) $\frac{d}{dx} x^5 = 5x^4$ $\frac{d}{dx} x^4 = 4x^3$ $\frac{d}{dx} x^3 = 3x^2$ $\frac{d}{dx} x^2 = 2x$ $\frac{d}{dx} x = 1$ $\frac{d}{dx} x^0 = 0$

(b) $\frac{d}{dx} x^6 = 6x^5$ $\frac{d}{dx} x^5 = 5x^4$ $\frac{d}{dx} x^4 = 4x^3$ $\frac{d}{dx} x^3 = 3x^2$ $\frac{d}{dx} x^2 = 2x$ $\frac{d}{dx} x = 1$ $\frac{d}{dx} x^0 = 0$

6. (a) $\frac{d}{dx} x^7 = 7x^6$ $\frac{d}{dx} x^6 = 6x^5$ $\frac{d}{dx} x^5 = 5x^4$ $\frac{d}{dx} x^4 = 4x^3$ $\frac{d}{dx} x^3 = 3x^2$ $\frac{d}{dx} x^2 = 2x$ $\frac{d}{dx} x = 1$ $\frac{d}{dx} x^0 = 0$

(b) $\frac{d}{dx} x^8 = 8x^7$ $\frac{d}{dx} x^7 = 7x^6$ $\frac{d}{dx} x^6 = 6x^5$ $\frac{d}{dx} x^5 = 5x^4$ $\frac{d}{dx} x^4 = 4x^3$ $\frac{d}{dx} x^3 = 3x^2$ $\frac{d}{dx} x^2 = 2x$ $\frac{d}{dx} x = 1$ $\frac{d}{dx} x^0 = 0$

(c) $\frac{d}{dx} x^9 = 9x^8$ $\frac{d}{dx} x^8 = 8x^7$ $\frac{d}{dx} x^7 = 7x^6$ $\frac{d}{dx} x^6 = 6x^5$ $\frac{d}{dx} x^5 = 5x^4$ $\frac{d}{dx} x^4 = 4x^3$ $\frac{d}{dx} x^3 = 3x^2$ $\frac{d}{dx} x^2 = 2x$ $\frac{d}{dx} x = 1$ $\frac{d}{dx} x^0 = 0$

7. $\frac{d}{dx} x^4 = 4x^3$ $\frac{d}{dx} x^3 = 3x^2$ $\frac{d}{dx} x^2 = 2x$ $\frac{d}{dx} x = 1$ $\frac{d}{dx} x^0 = 0$

