

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

2. $\frac{d}{dx} \frac{1}{x^3} = \frac{d}{dx} x^{-3} = -3x^{-4} = -\frac{3}{x^4}$
 $\frac{d}{dx} \frac{1}{x^3} = -\frac{3}{x^4}$
 3. $\frac{d}{dx} \frac{1}{x^4} = \frac{d}{dx} x^{-4} = -4x^{-5} = -\frac{4}{x^5}$
 $\frac{d}{dx} \frac{1}{x^4} = -\frac{4}{x^5}$
 4. $\frac{d}{dx} \frac{1}{x^5} = \frac{d}{dx} x^{-5} = -5x^{-6} = -\frac{5}{x^6}$
 $\frac{d}{dx} \frac{1}{x^5} = -\frac{5}{x^6}$
 5. $\frac{d}{dx} \frac{1}{x^6} = \frac{d}{dx} x^{-6} = -6x^{-7} = -\frac{6}{x^7}$
 $\frac{d}{dx} \frac{1}{x^6} = -\frac{6}{x^7}$

6. $\frac{d}{dx} \frac{1}{x^7} = \frac{d}{dx} x^{-7} = -7x^{-8} = -\frac{7}{x^8}$
 $\frac{d}{dx} \frac{1}{x^7} = -\frac{7}{x^8}$
 7. $\frac{d}{dx} \frac{1}{x^8} = \frac{d}{dx} x^{-8} = -8x^{-9} = -\frac{8}{x^9}$
 $\frac{d}{dx} \frac{1}{x^8} = -\frac{8}{x^9}$
 8. $\frac{d}{dx} \frac{1}{x^9} = \frac{d}{dx} x^{-9} = -9x^{-10} = -\frac{9}{x^{10}}$
 $\frac{d}{dx} \frac{1}{x^9} = -\frac{9}{x^{10}}$