

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

2. $\frac{d}{dx} \ln(x) = \frac{1}{x}$, $\frac{d}{dx} \ln(x^2) = \frac{1}{x^2} \cdot 2x = \frac{2}{x}$

1. $x^2 + 2x + 1 = (x+1)^2$
 $x^2 + 2x + 1 = x^2 + 2x + 1$

2. $x^2 + 4x + 4 = (x+2)^2$
 $x^2 + 4x + 4 = x^2 + 4x + 4$

3. $x^2 + 6x + 9 = (x+3)^2$
 $x^2 + 6x + 9 = x^2 + 6x + 9$

4. $x^2 + 8x + 16 = (x+4)^2$
 $x^2 + 8x + 16 = x^2 + 8x + 16$

5. $x^2 + 10x + 25 = (x+5)^2$
 $x^2 + 10x + 25 = x^2 + 10x + 25$

6. $x^2 + 12x + 36 = (x+6)^2$
 $x^2 + 12x + 36 = x^2 + 12x + 36$

7. $x^2 + 14x + 49 = (x+7)^2$
 $x^2 + 14x + 49 = x^2 + 14x + 49$