$y=$ power of $x$ is $2+2 x+1 / x+1$ differentiate it.

## Solution

The function is

$$
y=x^{2}+2 x+\frac{1}{x}+1
$$

And its derivative is

$$
\frac{d y}{d x}=\frac{d}{d x}\left(x^{2}+2 x+\frac{1}{x}+1\right)=2 x+2-\frac{1}{x^{2}}
$$

Answer:

$$
\frac{d y}{d x}=2 x+2-\frac{1}{x^{2}}
$$

