$$y = \sin x$$

$$y' = \cos x$$

$$y = \cos x$$

$$y' = -\sin x$$

$$y = \tan x$$

$$y' = \frac{1}{\cos^2 x}$$

$$y = \sin 2x$$

$$y' = 2\cos 2x$$

$$y = \cos 3x$$

$$y' = -3\sin 3x$$

$$y = \tan 4x$$

$$y' = \frac{4}{\cos^2 4x}$$

$$y = \sin^2 x$$

$$
\begin{aligned}
y' &= 2\sin x \cos x \\
&= \sin 2x
\end{aligned}
$$

$$y = \cos^2 x$$

$$
\begin{aligned}
y' &= -2\cos x \sin x \\
&= -\sin 2x
\end{aligned}
$$

$$y = \tan^2 x$$

$$y' = 2\tan x \cdot \frac{1}{\cos^2 x}$$

$$= \frac{2\sin x}{\cos^3 x}$$

$$y = \frac{1}{\sin x}$$

$$y' = -\frac{\cos x}{\sin^2 x}$$

$$y = \frac{1}{\cos x}$$

$$y' = \frac{\sin x}{\cos^2 x}$$

$$y = \frac{1}{\tan x}$$

$$y' = -\frac{1}{\tan^2 x} \cdot \frac{1}{\cos^2 x}$$

$$= -\frac{1}{\sin^2 x}$$

$$y = \sin^2 3x$$

$$
\begin{aligned}
y' &= 6\sin 3x \cos 3x \\
&= 3\sin 6x
\end{aligned}
$$

$$y = \cos^2 3x$$

$$
\begin{aligned}
y' &= -6\cos 3x \sin 3x \\
&= -3\sin 6x
\end{aligned}
$$

$$y = \tan^2 3x$$

$$y' = 2\tan 3x \cdot \frac{3}{\cos^2 3x}$$

$$= \frac{6\sin 3x}{\cos^3 3x}$$