11. $h(x) = \ln\sqrt{1+3\tan^2 x}$

$= \ln\left(1+3(\tan x)^2\right)^{\frac{1}{2}}$

$= \frac{1}{2}\ln\left(1+3(\tan x)^2\right)$

$h'(x) = \frac{1}{2}\cdot\frac{1}{1+3(\tan x)^2}\cdot\frac{d}{dx}\left(1+3(\tan x)^2\right)$

$= \frac{1}{2}\cdot\frac{1}{1+3\tan^2 x}\cdot 3\cdot 2(\tan x)^1\cdot\frac{d}{dx}(\tan x)$

$= \frac{1}{2}\cdot\frac{1}{1+3\tan^2 x}\cdot 6\tan x\sec^2 x$

$= \frac{6\tan x\sec^2 x}{2(1+3\tan^2 x)}$

$= \boxed{\frac{3\tan x\sec^2 x}{1+3\tan^2 x}}$