5 It is given that $y = 3\tan^2 x$ for $0° < x < 360°$.

(a) Show that $\frac{\mathrm{d}y}{\mathrm{d}x} = m\tan x \sec^2 x$ where m is an integer to be found. [2]

(b) Find all values of x such that $\frac{\mathrm{d}y}{\mathrm{d}x} = 3\sec x \operatorname{cosec} x$. [5]