

8 (a) Given that $\cos x \neq 0$ state the value of $\sec^2 x - \tan^2 x$

[1 mark]

8 (b) Show that

$$(3\sec x + 5\tan x)(5\sec x - 3\tan x) - \frac{16\tan x}{\cos x} = N$$

where N is an integer to be found.

[4 marks]

8 (c) State the **two** values of x between 0° and 360° for which the value of N in part (b) is not valid.

[1 mark]