10 **(a)** By writing $\cot x$ and $\tan x$ in terms of $\cos x$ and $\sin x$, show that

$$\frac{\sin x}{1-\cot x}+\frac{\cos x}{1-\tan x}=\sin x+\cos x. \qquad [5]$$

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(b) Solve the equation $9\cot x + 3\operatorname{cosec} x = \tan x$, for $0° < x < 360°$. [5]

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