Q	Marking instructions	AO	Marks	Typical solution
8(a)	States the value 1	1.2	B1	1
	Subtotal		**1**	

Q	Marking instructions	AO	Marks	Typical solution
8(b)	Expands the given brackets to obtain at least three of the following four terms $15\sec^2 x$ $25\sec x\tan x$ $-9\sec x\tan x$ OE $-15\tan^2 x$	3.1a	M1	$(3\sec x+5\tan x)(5\sec x-3\tan x)-\frac{16\tan x}{\cos x}$ $=15\sec^2 x-9\sec x\tan x+25\sec x\tan x$ $-15\tan^2 x-16\sec x\tan x$
	Expands the given brackets to obtain $15\sec^2 x+25\sec x\tan x-9\sec x\tan x-15\tan^2 x$ or $15\sec^2 x+16\sec x\tan x-15\tan^2 x$ OE	1.1b	A1	$=15\left(\sec^2 x-\tan^2 x\right)$ $=15$
	Evaluates $15\sec^2 x-15\tan^2 x$ to 15 **Or** Evaluates $16\sec x\tan x-\frac{16\tan x}{\cos x}$ to 0	2.2a	B1	
	Completes reasoned argument to obtain 15 Argument must include a conversion of $16\sec x\tan x$ or $\frac{16\tan x}{\cos x}$ to a common form before cancellation CSO	2.1	R1	
	Subtotal		**4**	

Q	Marking instructions	AO	Marks	Typical solution
8(c)	Obtains 90 and 270 CAO	2.2a	R1	$x=90,\ x=270$
	Subtotal		**1**	

	Question 8 Total		**6**	