9) Cont.

b) $\cos x \cos 4x + \sin x \sin 4x =$

$= \cos(x - 4x)$

$= \cos(-3x) = \underline{\cos 3x}$

c) $\sin 5 \cos 2 - \cos 5 \sin 2 =$

$= \sin(5-2) = \underline{\sin 3}$

d) $\sin 2m \cos m + \cos 2m \sin m =$

$= \sin(2m + m) =$

$= \underline{\sin 3m}$

e) $\dfrac{\operatorname{tg} 2a + \operatorname{tg} 3a}{1 - \operatorname{tg} 2a \operatorname{tg} 3a}$

$= \operatorname{tg}(2a + 3a) = \underline{\operatorname{tg} 5a}$

f) $\dfrac{\operatorname{tg} 7 - \operatorname{tg} 9}{1 + \operatorname{tg} 7 \operatorname{tg} 9} = \operatorname{tg}(7-9)$

$= \operatorname{tg}(-2)$

$= \underline{-\operatorname{tg} 2}$

g) $\cos^2 x - \sin^2 x =$

$= \cos x \cos x - \sin x \sin x$

$= \cos(x + x)$

$= \underline{\cos 2x}$

h) $\sin a \cos a + \cos a \sin a =$

$= \sin(a + a) = \underline{\sin 2a}$

i) $\dfrac{\operatorname{tg} x + \operatorname{tg} x}{1 - \operatorname{tg}^2 x} = \operatorname{tg}(x + x)$

$= \underline{\operatorname{tg} 2x}$

j) $\cos^2 2 + \sin^2 2 =$

$= \cos(2-2) = \cos 0 = \underline{1}$