(16 - cont.)

$$= \frac{\sin^2 x\,(1-\sin^2 y) - \sin^2 y\,(1-\sin^2 x)}{\cos^2 x\,(1-\sin^2 y) - (1-\cos^2 x)\sin^2 y}$$

$$= \frac{\sin^2 x - \cancel{\sin^2 x \sin^2 y} - \sin^2 y + \cancel{\sin^2 y \sin^2 x}}{\cos^2 x - \cancel{\cos^2 x \sin^2 y} - \sin^2 y + \cancel{\cos^2 x \sin^2 y}}$$

$$= \frac{\sin^2 x - \sin^2 y}{\cos^2 x - \sin^2 y} \quad //$$

17) $$\frac{tg(x-y) + tg\,y}{1 - tg(x-y)\,tg\,y} = tg\,x$$

$$\left\{ Tg(x-y) = \frac{tg\,x - tg\,y}{1 + tg\,x\,tg\,y} \right.$$

Then:

$$tg(x-y) + tg\,y = \frac{tg\,x - tg\,y}{1 + tg\,x\,tg\,y} + tg\,y$$

$$= \frac{tg\,x - \cancel{tg\,y} + \cancel{tg\,y} + tg\,x\,tg^2 y}{1 + tg\,x\,tg\,y}$$

$$= \frac{tg\,x\,(1 + tg^2 y)}{1 + tg\,x\,tg\,y} = \frac{tg\,x\,\sec^2 y}{1 + tg\,x\,tg\,y}$$

$\longrightarrow$