n°7p164

1) $f(x) = \sin(x)\cos^2(x)$ Posons $u(x) = \sin(x)$ $u'(x) = \cos(x)$
et $v(x) = \cos^2(x)$ $v'(x) = -2\cos(x)\sin$

$f'(x) = \cos x \cos^2 x + 2\cos x \sin^2 x$
$f'(x) = \cos x (\cos^2 x + 2\sin^2 x)$ Or $\cos^2 x = 1 - \sin^2 x$, donc
$f'(x) = \cos x (1 - \sin^2 x + 2\sin^2 x)$
$\underline{f'(x) = \cos x (1 + 3\sin^2 x)}$

2) Or $\sin^2 x = 1 - \cos^2 x$, donc
$f'(x) = \cos x (1 + 3(1 - \cos^2 x))$
$f'(x) = \cos x (1 + 3 - 3\cos^2 x)$
$\underline{f'(x) = \cos x (4 - 3\cos^2 x)}$