16 (114) $\lim_{x\to\frac{\pi}{2}} \operatorname{tg}x(\sin x-1) = \lim_{x\to\frac{\pi}{2}} \frac{\sin x(\sin x-1)(\sin x+1)}{\cos x(\sin x+1)} = \lim_{x\to\frac{\pi}{2}} \frac{\sin x(1-\sin^2 x)}{(\sin x+1)\operatorname{tg}x} = \lim \frac{\sin x\cos^2 x}{\operatorname{tg}x(\sin x+1)} =$

$= \lim \frac{\sin x\cos x}{\sin x+1} = \frac{1\cdot 0}{1+1} = 0$