Question - convolution of two functions

Let

$$g(t_1) = \cos(\omega_0 t_1)$$
$$h(t_1) = \frac{1}{\pi t_1}$$

be two functions of variable t_1. Why is it true that

$$g(t_1) * h(t_1) = \cos(\omega_0 t_1) * \frac{1}{\pi t_1} = \sin(\omega_0 t_1)$$

i.e. why the convolution of those functions / signals yields $\sin(\omega_0 t_1)$?

Thanks! ☺