

c) $\text{tg } a = \frac{3}{4}$ i $180^\circ \leq a \leq 270^\circ$

Terim:

$\sin^2 a + \cos^2 a = 1$

i

$\text{tg } a = \frac{\sin a}{\cos a} \Leftrightarrow \sin a = \cos a \text{tg } a$

\Downarrow
 $a \in \text{III } Q.$
 \Downarrow
 $\cos a \text{ i } \sin a \leq 0$

Per tant:

$$\left. \begin{aligned} \sin^2 a + \cos^2 a &= 1 \\ \sin a &= \frac{3}{4} \cos a \end{aligned} \right\}$$

$\frac{3}{4}$

Substituïm la 2a equació en la 1a:

$\left(\frac{3}{4} \cos a\right)^2 + \cos^2 a = 1$

$\frac{9}{16} \cos^2 a + \cos^2 a = 1$

$\frac{25}{16} \cos^2 a = 1$

$\cos^2 a = \frac{16}{25}$

$\cos a = -\sqrt{\frac{16}{25}} = -\frac{4}{5}$

$\cos a \leq 0$

Substituïm en la 2a equació:

$\sin a = \frac{3}{4} \left(-\frac{4}{5}\right) = -\frac{3}{5}$

$\text{cosec } a = \frac{1}{\sin a} = -\frac{5}{3}$

$\text{sec } a = \frac{1}{\cos a} = -\frac{5}{4}$

$\text{cotg } a = \frac{1}{\text{tg } a} = \frac{4}{3}$