7

7 $\quad tg\,\alpha = \dfrac{3}{4}$

$$\left.\begin{array}{l} \sin^2\alpha + \cos^2\alpha = 1 \\ tg\,\alpha = \dfrac{\sin\alpha}{\cos\alpha} \Leftrightarrow \sin\alpha = \cos\alpha\,\underbrace{tg\,\alpha}_{\frac{3}{4}} \end{array}\right\}$$

Per tant, si substituïm en la 1a equació:

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

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

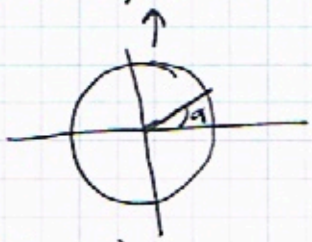
$$\frac{25}{16}\cos^2\alpha = 1 \Leftrightarrow \cos^2\alpha = \frac{16}{25} \Rightarrow \cos\alpha = \pm\frac{4}{5}$$

$\boxed{\text{Si} \quad \cos\alpha = \frac{4}{5}}$

a) $\sin\alpha = \dfrac{3}{4}\cdot\dfrac{4}{5} = \dfrac{3}{5}$

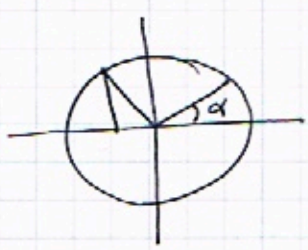
b) $\cos\alpha = \dfrac{4}{5}$

c) $\sin(90^\circ - \alpha) = \cos\alpha = \dfrac{4}{5}$



d) $\cos(90^\circ + \alpha) =$

$= -\sin\alpha = -\dfrac{3}{5}$



e) $\cos(180^\circ - \alpha) = -\cos\alpha = -\dfrac{4}{5}$