

$$\frac{3-4ai}{4-3i} = \frac{(3-4ai)(4+3i)}{(4-3i)(4+3i)} =$$

$$= \frac{12+9i-16ai-12ai^2}{16+\cancel{12i}-\cancel{12i}-9i^2} = \frac{12+9i-16ai+12a}{16+9} =$$

$$= \frac{12+12a+9i-16ai}{25} = \frac{12+12a}{25} + \frac{9-16a}{25}i$$

$$\frac{12+12a}{25} = 0 \Rightarrow 12+12a = 0 \Rightarrow a = -1$$

CUANDO $a = -1$ SE TRATA DE UN NÚMERO
IMAGINARIO PURO.