Answer on Question #84273 – Math – Other

Question

sin inverse(xsquare /y) is a homogeneous function of x and y. True or false?

Solution

$\mathrm{f}(\mathrm{ax}, \mathrm{ay}) = \sin^{-1}\left(\frac{(\mathrm{ax})^2}{\mathrm{ay}}\right) = \sin^{-1}\left(\frac{\mathrm{ax}^2}{\mathrm{y}}\right)$.

There is no such k that $sin^{-1}\left(\frac{ax^2}{y}\right) = a^k sin^{-1}\left(\frac{x^2}{y}\right)$.

Function $\sin^{-1}\left(\frac{\mathrm{x}^2}{\mathrm{y}}\right)$ is not homogeneous.

Answer: False.