

1/10/2018

561

COMPLETA

$$\arccos\left[\sin\left(-\frac{\pi}{6}\right)\right] = \boxed{\phantom{000}},$$

$$\sin\left[\arctan\left(-\frac{4}{3}\right)\right] = \boxed{\phantom{000}},$$

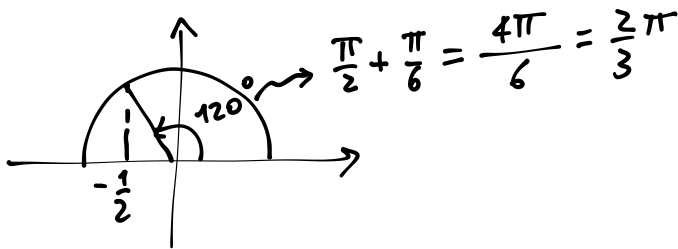
$$\cos\left(\arctan\frac{\sqrt{3}}{3}\right) = \boxed{\frac{\sqrt{3}}{2}},$$

$$\cot\left[\arcsin\left(-\frac{1}{2}\right)\right] = \boxed{\phantom{000}},$$

$$\arccos\left(\sin\frac{3}{2}\pi\right) = \boxed{\pi},$$

$$\tan[\arctan(-1)] = \boxed{-1}.$$

$$\arccos\left[\sin\left(-\frac{\pi}{6}\right)\right] = \arccos\left[-\frac{1}{2}\right] = \frac{2}{3}\pi$$



$$\sin\left[\arctan\left(-\frac{4}{3}\right)\right] =$$

$$\tan \alpha = \frac{\sin \alpha}{\cos \alpha}$$

$$\tan^2 \alpha = \frac{\sin^2 \alpha}{\cos^2 \alpha}$$

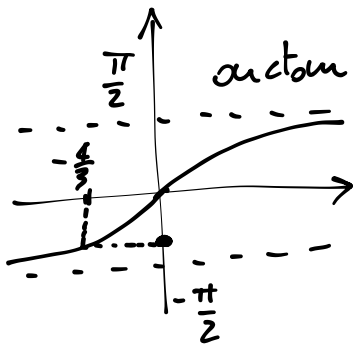
$$\tan^2 \alpha = \frac{\sin^2 \alpha}{1 - \sin^2 \alpha}$$

$$(1 - \sin^2 \alpha) \tan^2 \alpha = \sin^2 \alpha$$

$$\tan^2 \alpha - \sin^2 \alpha \tan^2 \alpha - \sin^2 \alpha = 0$$

$$-\sin^2 \alpha (\tan^2 \alpha + 1) = -\tan^2 \alpha$$

$$\boxed{\sin^2 \alpha = \frac{\tan^2 \alpha}{1 + \tan^2 \alpha}}$$



$$\sin\left[\arctan\left(-\frac{4}{3}\right)\right] = -\sqrt{\frac{\tan^2\left(\arctan\left(-\frac{4}{3}\right)\right)}{1 + \tan^2\left(\arctan\left(-\frac{4}{3}\right)\right)}} = -\sqrt{\frac{\frac{16}{9}}{1 + \frac{16}{9}}} =$$

Il seno di un angolo fra  $-\frac{\pi}{2}$  e 0 è negativo  $\parallel = -\sqrt{\frac{16}{25}} = -\frac{4}{5}$

$$\cot(\arcsin(-\frac{1}{2})) =$$

1° modo

$$= \frac{\cos(\arcsin(-\frac{1}{2}))}{\sin(\arcsin(-\frac{1}{2}))} = \frac{\sqrt{1 - \sin^2(\arcsin(-\frac{1}{2}))}}{-\frac{1}{2}} =$$

$$= \frac{\sqrt{1 - \frac{1}{4}}}{-\frac{1}{2}} = \frac{\sqrt{\frac{3}{4}}}{-\frac{1}{2}} = \boxed{-\sqrt{3}}$$

2° modo

$$\cot(-\frac{\pi}{6}) = \frac{\cos(-\frac{\pi}{6})}{\sin(-\frac{\pi}{6})} = \frac{\frac{\sqrt{3}}{2}}{-\frac{1}{2}} = \boxed{-\sqrt{3}}$$

562 VERO O FALSO?

a.  $\arcsin \frac{1}{2} = \frac{5}{6}\pi$

V  F

b.  $\arctan \frac{\pi}{4} = 1$

V  F

c.  $\arcsin 0 = \arccos 1$

V  F

d.  $\cos(\arccos \frac{1}{2}) = \frac{\pi}{3}$

V  F

e.  $\tan[\arctan(-1)] = -1$

V  F

f.  $\arccos(\cos \frac{1}{3}) + \operatorname{arccot}(\cot \frac{1}{3}) = \frac{2}{3}$

V  F

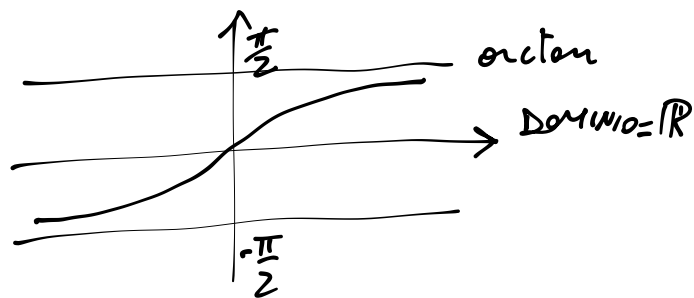
575

$$y = \arctan \frac{2x+3}{x-2}$$

Trova il dominio

$$x-2 \neq 0 \Rightarrow x \neq 2$$

$\arctan(x)$  è definita per qualsiasi  $x$



$$D = (-\infty, 2) \cup (2, +\infty)$$

oppure

$$D = ]-\infty, 2[ \cup ]2, +\infty[$$