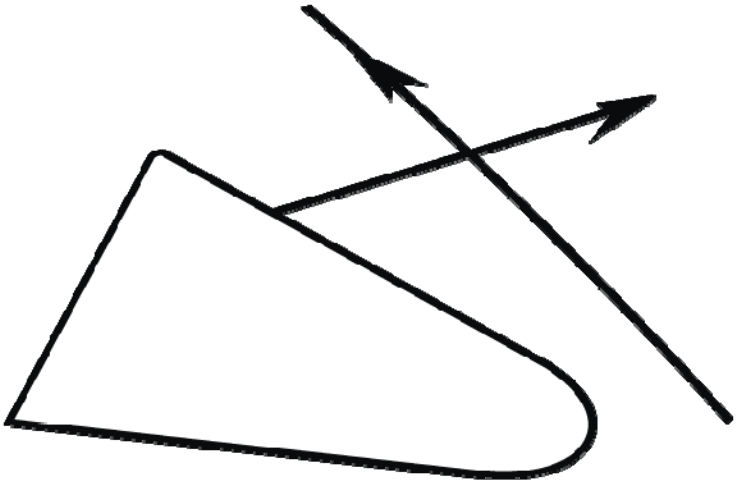
Name _____ Date _____

Using the Unit Circle Reference Angles - Step-by-Step Lesson

Find the exact values of sin t for the given real number.

t = 7Π/4



Explanation:

In each part we begin by finding the reference angle corresponding to the given real number t.

We find that an angle of t = 7Π/4 radian determines a point P(7Π/4) in the fourth quadrant and has the reference angle t' =Π/4 radians.

After adjusting the signs of the coordinates of P(Π/4) =(√2/2,√2/2) to obtain the fourth quadrant point P(7Π/4)= =(√2/2,-√2/2), we find that

Sin $\frac{7\pi}{4}$ = -sin $\frac{\pi}{4}$ = -$\frac{\sqrt{2}}{2}$ and cos $\frac{7\pi}{4}$ = cos $\frac{\pi}{4}$ = $\frac{\sqrt{2}}{2}$