



Advanced Functions – Fall 2011

Chapter 6 – Trigonometric Functions

Quiz: Angles of Rotation and Trig Ratios (No Calculators!!)

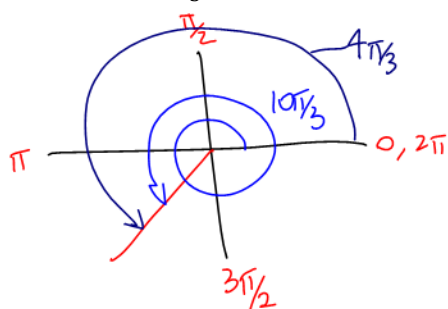
Name Sawtjones

C ___/2

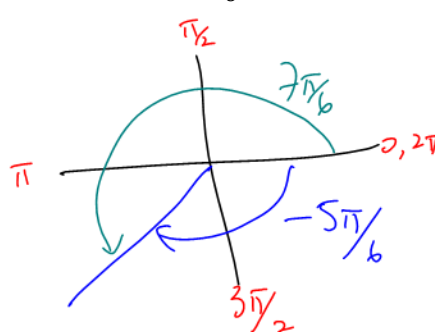
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1. Draw the angles of rotation, and determine the principal angle. (0.5 marks each)

a) $\theta = \frac{10\pi}{3}$



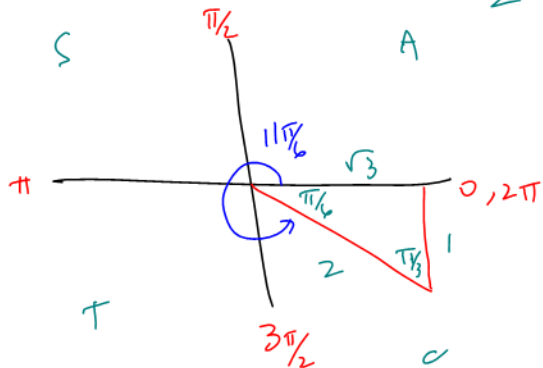
b) $\theta = -\frac{5\pi}{6}$



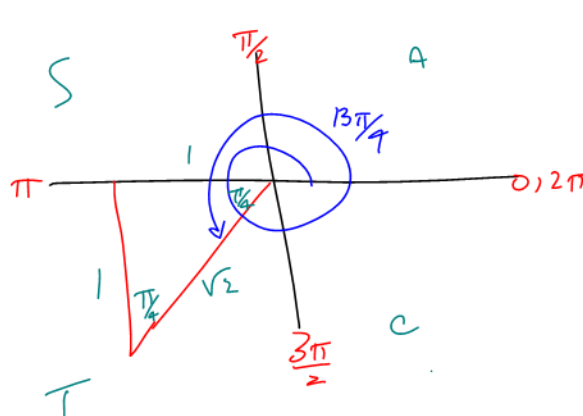
2. Determine the trig ratios exactly:

(1 mark each)

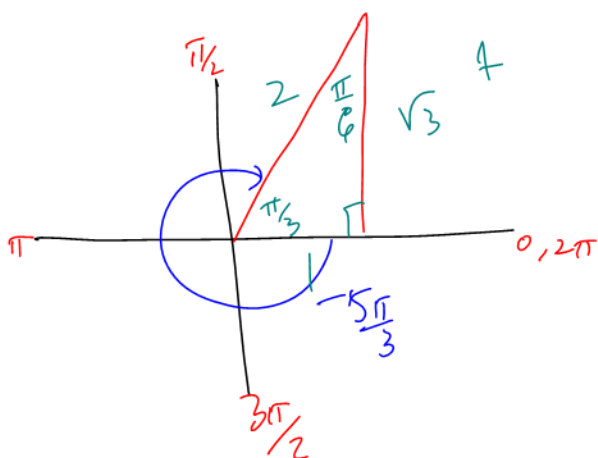
a) $\sin\left(\frac{11\pi}{6}\right) = -\frac{1}{2}$



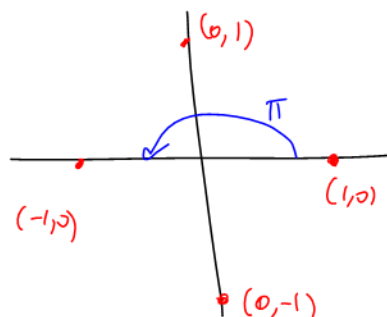
b) $\tan\left(\frac{13\pi}{4}\right) = +1$



c) $\sec\left(-\frac{5\pi}{3}\right) = +2$



d) $\cos(\pi) = -1$

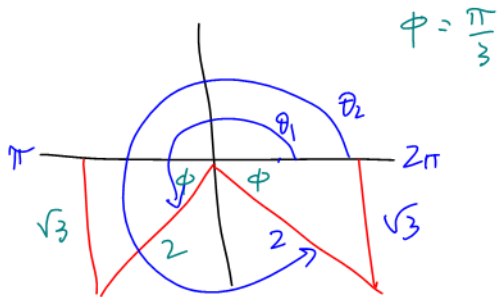


3. For $\theta \in [0, 2\pi]$, determine the angles of rotation given the trig ratio: (2 marks each)

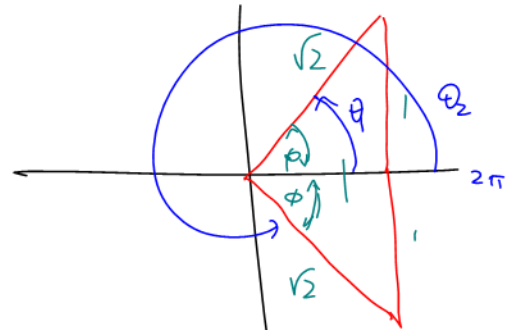
a) $\sin(\theta) = -\frac{\sqrt{3}}{2}$

b) $\cos(\theta) = \frac{1}{\sqrt{2}}$

$\phi = \frac{\pi}{4}$



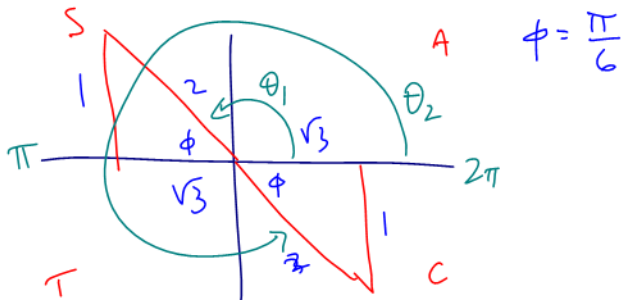
$\theta_1 = \frac{4\pi}{3}, \theta_2 = \frac{5\pi}{3}$



$\theta_1 = \frac{\pi}{4}, \theta_2 = \frac{7\pi}{4}$

c) $\cot(\theta) = -\sqrt{3}$

$\tan(\theta) = -\frac{1}{\sqrt{3}}$



$\theta_1 = \frac{5\pi}{6}, \theta_2 = \frac{11\pi}{6}$

d) $\csc(\theta) = -1$

AXIS ANGLE

$\sin(\theta) = -1$

