

- (1) Find the point on the unit circle:
- corresponding to the terminal point for $t = -7\pi/2$.
 - corresponding to the terminal point for $t = 14\pi/3$.
 - corresponding to the terminal point for $t = 11\pi/6$.

- (2) Find the reference number \bar{t} for:

(a) $t = 17\pi/4$

(b) $t = -2\pi/7$

(c) $t = -8\pi/3$

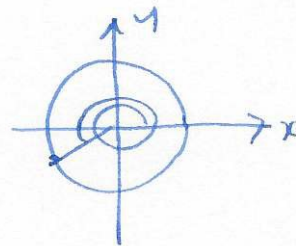
t	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$
x	$\frac{\sqrt{4}}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{1}}{2}$	$\frac{\sqrt{0}}{2}$
y	$\frac{\sqrt{0}}{2}$	$\frac{\sqrt{1}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{4}}{2}$

- (3) Find the exact value of:

(a) $\sin(19\pi/6) = -\frac{\sqrt{2}}{2}$ 3.a) $\frac{19}{6}\pi = (3 + \frac{1}{6})\pi$.

(b) $\csc(19\pi/6) = \frac{1}{\sin(19\pi/6)} = -\frac{2}{\sqrt{2}}$.

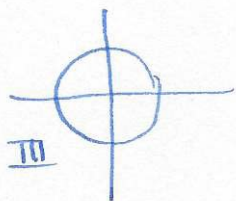
(c) $\cot(19\pi/6) = \frac{\cos(19\pi/6)}{\sin(19\pi/6)} = \frac{-\sqrt{3}/2}{-\sqrt{2}/2} = \frac{\sqrt{3}}{\sqrt{2}}$.



- (4) Write $\cos(t)$ in terms of $\sin(t)$ in Quadrant III.
- (5) Write $\tan(t)$ in terms of $\cos(t)$ in Quadrant IV.
- (6) If $\cos(t) = -\frac{4}{5}$ and t is in Quadrant III, find the values of the other trig functions at t .
- (7) Is $f(x) = x \sin^3(x)$ even, odd, or neither?

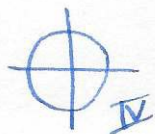
Q4 $\cos^2(t) + \sin^2(t) = 1$

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



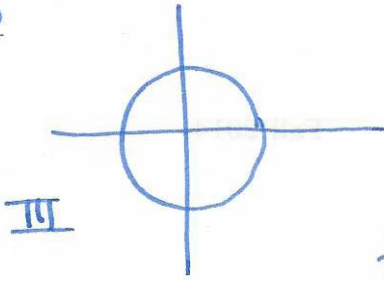
Q5 $\cos^2 t + \sin^2 t = 1$

$$1 + \tan^2 t = \sec^2(t) = \frac{1}{\cos^2(t)}$$



$$\tan(t) = -\sqrt{\sec^2(t) - 1} = -\sqrt{\frac{1}{\cos^2(t)} - 1}$$

Q6



$$\cos(t) = -\frac{4}{5} \Rightarrow \sin(t) = -\sqrt{1 - \left(\frac{4}{5}\right)^2}$$
$$= -\sqrt{\frac{9}{25}} = -\frac{3}{5}$$

$$\tan(t) = \frac{-3/5}{-4/5} = -\frac{3}{4}$$

$$\sec(t) = -\frac{5}{4} \quad \csc(t) = -\frac{5}{3} \quad \cot(t) = -\frac{4}{3}$$

Q7

$$f(-x) = -x \sin^3(-x) = x \sin^3(x) = \text{even}$$