

1)  $\frac{15\pi}{4} \cdot \frac{180}{\pi} = 675^\circ$

2)  $20 \cdot \frac{\pi}{180} = \frac{\pi}{9}$

3)  $9 \cdot \frac{180}{\pi} = \frac{1620}{\pi}^\circ$

4)  $-200 \cdot \frac{\pi}{180} = -\frac{10\pi}{9}$

5)  $\frac{-540^\circ}{-180^\circ + 180^\circ}$

6)  $\frac{\pi/5}{5} = \frac{11\pi}{5} = -9\pi/5$

1.)  $\sin(-\pi/4) = -\frac{\sqrt{2}}{2}$

2.)  $\cos(\frac{5\pi}{6}) = -\frac{\sqrt{3}}{2}$

3.)  $\tan^{-\frac{5\pi}{3}} = \sqrt{3}$

4.)  $\cos^{-1}(-\frac{\sqrt{3}}{2}) = \frac{5\pi}{6}$

5.)  $\tan^{-1}(-1) = -\pi/4$

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

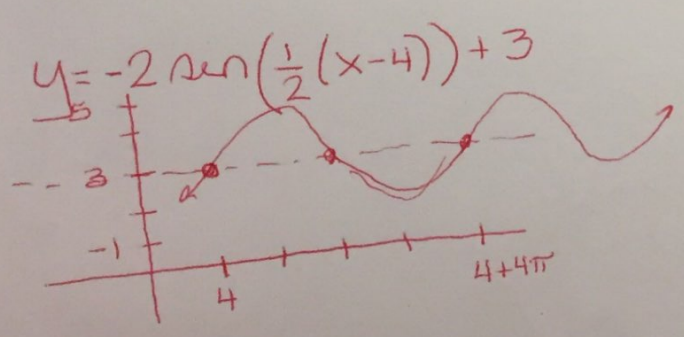
7.)  $\csc(\pi/6) - \cos(\pi/6) = 2 - \frac{\sqrt{3}}{2} = \frac{4 - \sqrt{3}}{2}$

a.)  $\sin x = -4/9$   $\tan x < 0$

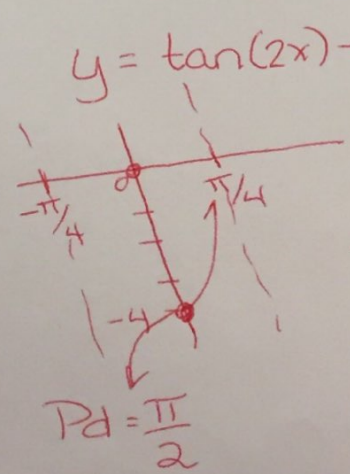
$\sin \theta = -4/9$   $\csc \theta = -9/4$   
 $\cos \theta = \frac{\sqrt{65}}{9}$   $\sec \theta = \frac{9}{\sqrt{65}} = \frac{9\sqrt{65}}{65}$   
 $\tan \theta = \frac{-4}{\sqrt{65}} = \frac{-4\sqrt{65}}{65}$   $\cot \theta = -\frac{\sqrt{65}}{4}$

b.)  $(5, -3)$

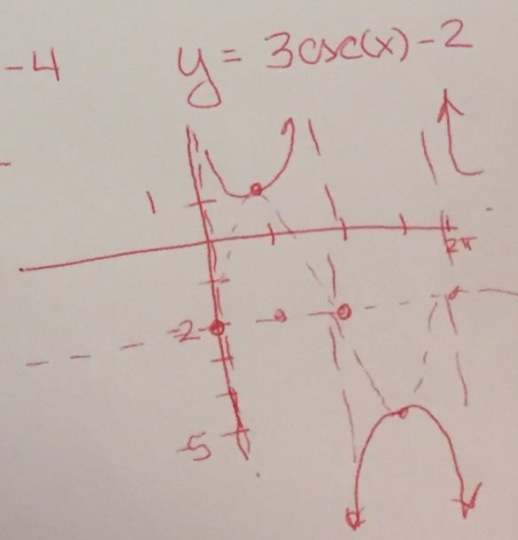
$\sin \theta = \frac{-3}{\sqrt{34}} = \frac{-3\sqrt{34}}{34}$   $\csc \theta = -\frac{\sqrt{34}}{3}$   
 $\cos \theta = \frac{5}{\sqrt{34}} = \frac{5\sqrt{34}}{34}$   $\sec \theta = \frac{\sqrt{34}}{5}$   
 $\tan \theta = -3/5$   $\cot \theta = 5/-3$



$Pd = \frac{2\pi}{\frac{1}{2}} = 4\pi$

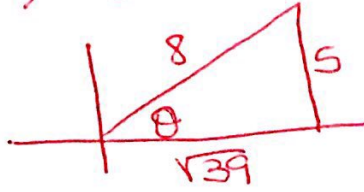


$Pd = \frac{\pi}{2}$



$$\tan(\cos^{-1}(5/8))$$

↑ not on unit circle



$$\tan \theta = \frac{5}{\sqrt{39}} = \frac{5\sqrt{39}}{39}$$

$$\angle 40^\circ \quad r = 3$$

$$\text{Area} = \frac{40}{360} \cdot \pi(9) = \pi \text{ m}^2$$

Sec

$$\text{Arc length} = \frac{40}{360} \cdot 2\pi(3) = \frac{2\pi}{3} \text{ M}$$

$$\angle = \frac{2\pi}{3} \quad r = 10$$

$$\text{Area} = \frac{2\pi/3}{2\pi} \cdot \pi(100) = \frac{100\pi}{3} \text{ m}^2$$

Sec

$$\text{Arc length} = \frac{2\pi/3}{2\pi} \cdot 2\pi(10) = \frac{20\text{ M}}{3}$$